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REPORT

VOLUME III

GEOTECHNICAL INVESTIGATION LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT SANTA CLARA COUNTY, CALIFORNIA

Prepared for
Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, California 95118-3686

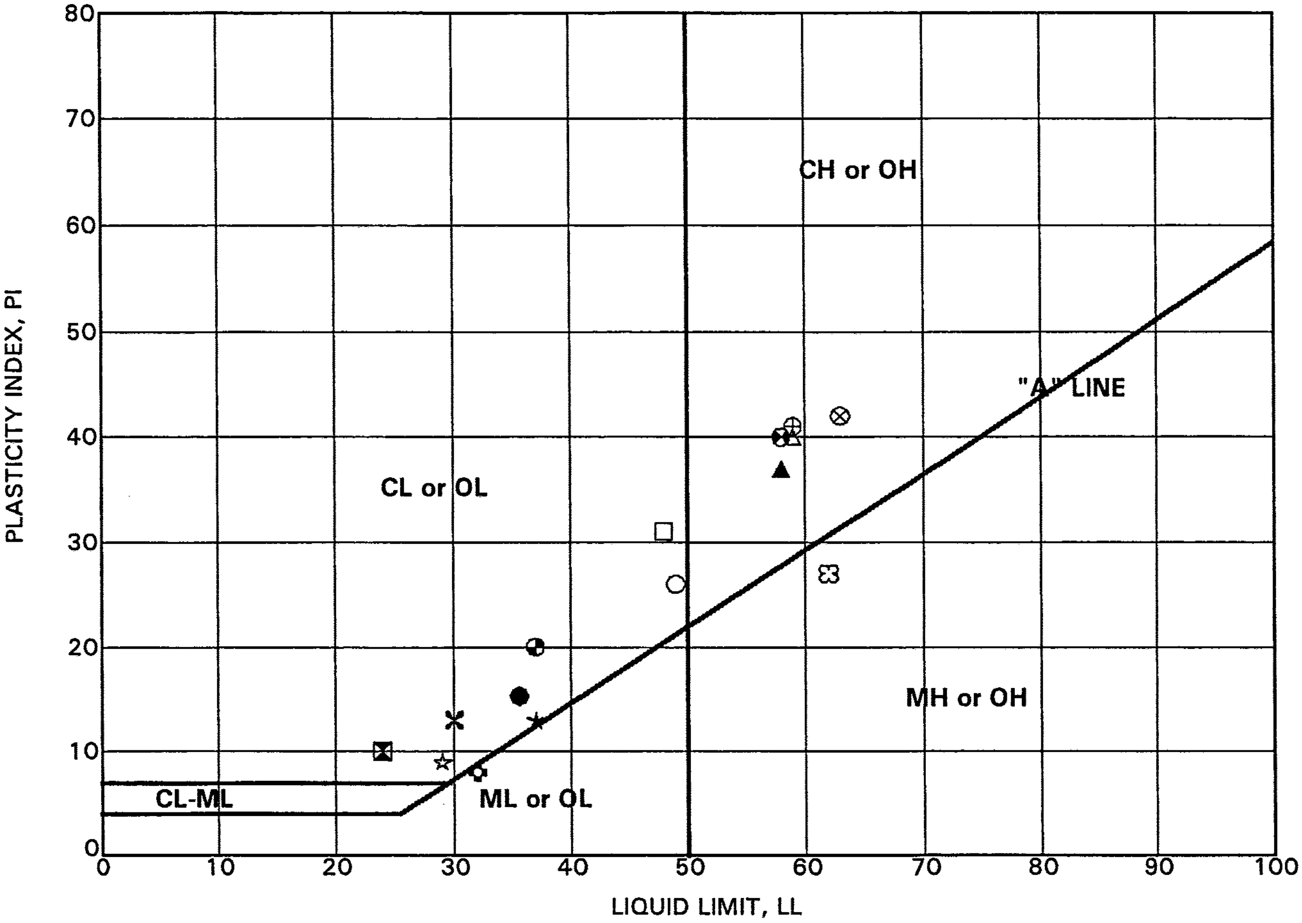
April 28, 2000

URS Greiner Woodward Clyde

55 South Market Street, Suite 1650
San Jose, California 95113

95-973017NB.00

APPENDIXB Laboratory Testing from Previous Investigations



Boring Number	Sample Number	Depth (feet)	Test Symbol	Moisture Content (%)	LL	PL	PI	Station (m)	Offset (m:pos=east)
AA-2	1	1	●	9	36	20	16	14+191	-180
GRIM-13		23	⧗		24	14	10	6+531	114
HHP-1		7	▲		58	21	37	10+131	52
HHP-1		17	★		37	24	13	10+131	52
HHP-1		37	✖		30	17	13	10+131	52
HHP-4		26	✪		32	24	8	10+128	-52
HHP-4		35	○	28	49	23	26	10+128	-52
PRMAR-1		6	△	35	59	19	40	6+020	133
PRMAR-1		9	⊗	37	63	21	42	6+020	133
PRMAR-1		15	⊕	24	59	18	41	6+020	133
PRMAR-1		18	□		48	17	31	6+020	133
PRMAR-3		12	⧗		58	18	40	6+182	167
PRMAR-5		15	◕	21	37	17	20	6+290	311
RBPS-56		11	☆	21	29	20	9	14+582	-40
RHM-G1	2-4	5	⌘		62	35	27		

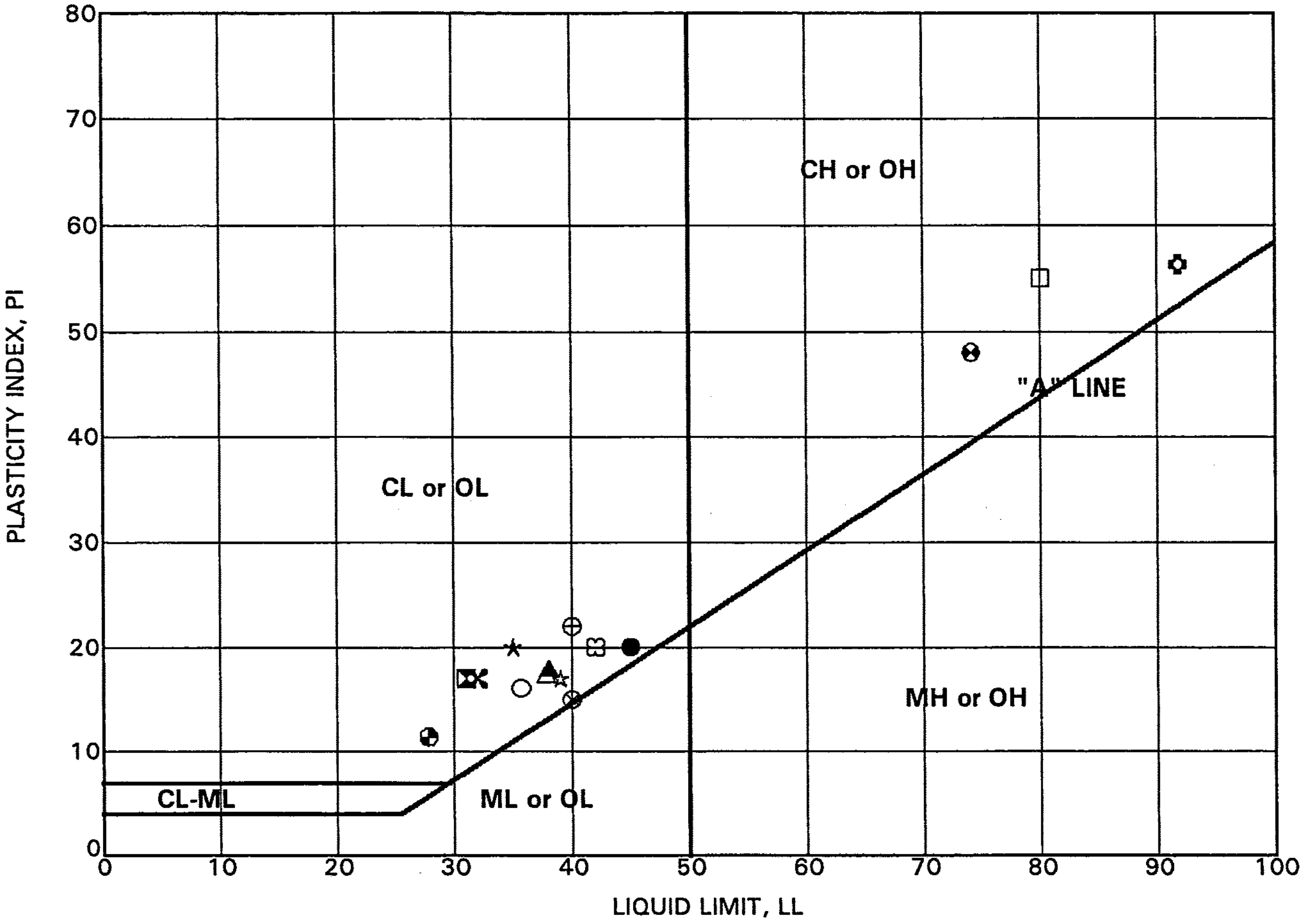
LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT
Project Number: 973017NB

PLASTICITY CHART

Figure

1/6/98 GUAD_PI1 GUADE

Woodward-Clyde Consultants



Boring Number	Sample Number	Depth (feet)	Test Symbol	Moisture Content (%)	LL	PL	PI	Station (m)	Offset (m:pos=east)
RHM-G2	4-4	15	●		45	25	20		
RREMB-1		6	⊠		31	14	17	6+663	198
RREMB-1		16	▲		38	20	18	6+663	198
RREMB-3		16	★		35	15	20	6+983	104
SDB-10	7	26	✖		32	15	17	16+260	-11
SDB-12	4	11	✿		92	36	56	16+287	-70
SDB-16	1	2	○	14	36	20	16	16+280	-89
SDB-7	2	4	△	18	38	20	18	16+362	-39
SIL-4		8	⊗	26	40	25	15		
SJIA-1		18	⊕	27	40	18	22	14+881	37
SJIA-2		13	□	32	80	25	55	14+883	-52
SJIA-22		11	⊛	26	74	26	48	15+721	-38
SJIA-24		16	◕	20	28	16	12	14+659	-107
SJIA-48		44	☆	27	39	22	17	14+948	119
SJIA-50		16	⌘	22	42	22	20	14+769	82

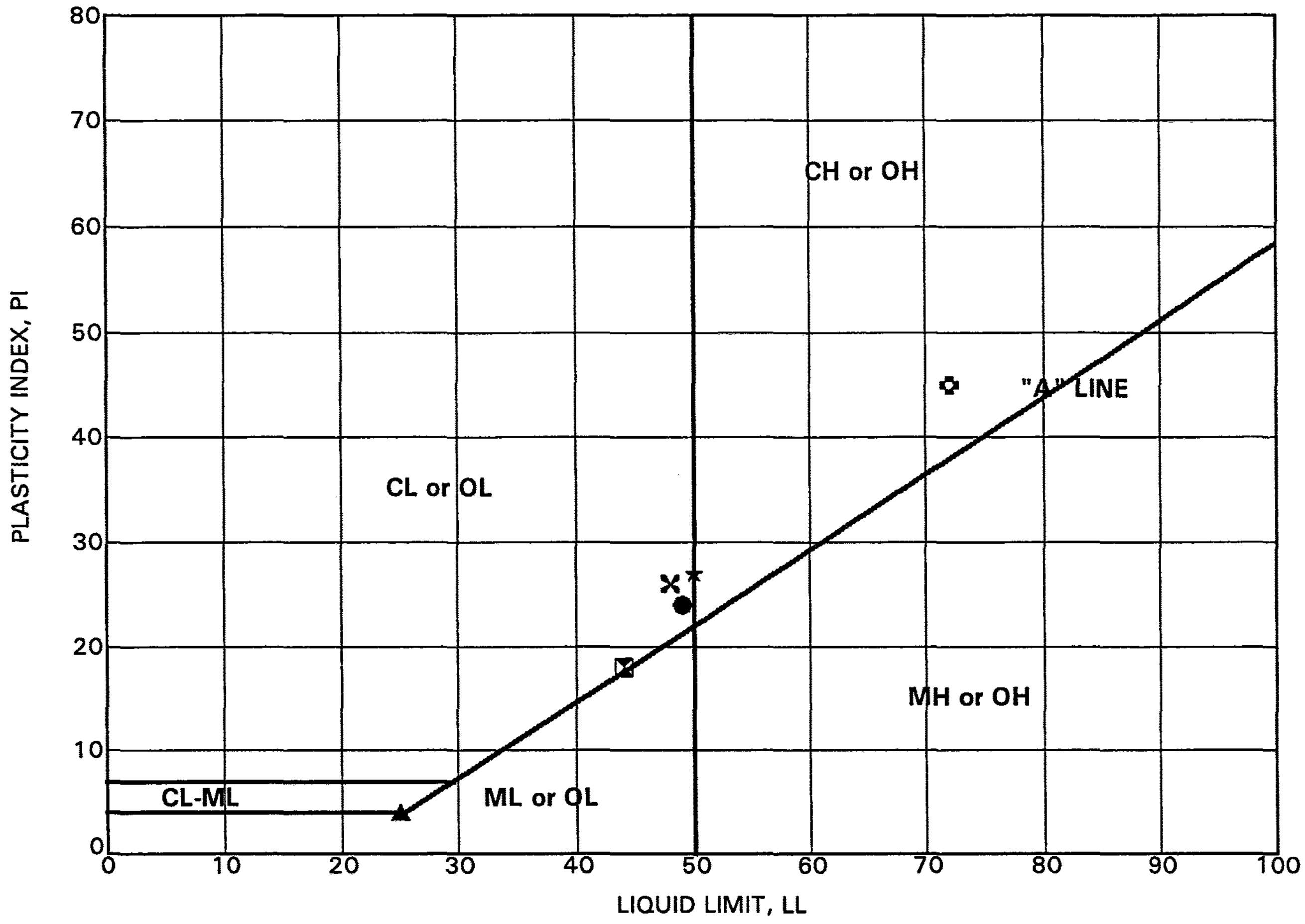
LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT
Project Number: 973017NB

PLASTICITY CHART

Figure

1/6/98 GUAD_PI1 GUADE

Woodward-Clyde Consultants



Boring Number	Sample Number	Depth (feet)	Test Symbol	Moisture Content (%)	LL	PL	PI	Station (m)	Offset (m:pos = east)
SPRR-1		19	●		49	25	24	11+981	38
SPRR-5		15	⊠		44	26	18	13+132	81
SPRRB-R2		16	▲		25	21	4	7+006	19
TDB-1		9	★	32	50	23	27	9+249	-80
TDB-1		16	✕		48	22	26	9+249	-80
TDB-1		21	✿	46	72	27	45	9+249	-80

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT
Project Number: 973017NB

PLASTICITY CHART

Figure

1/6/98 GUAD_PI1 GUADE

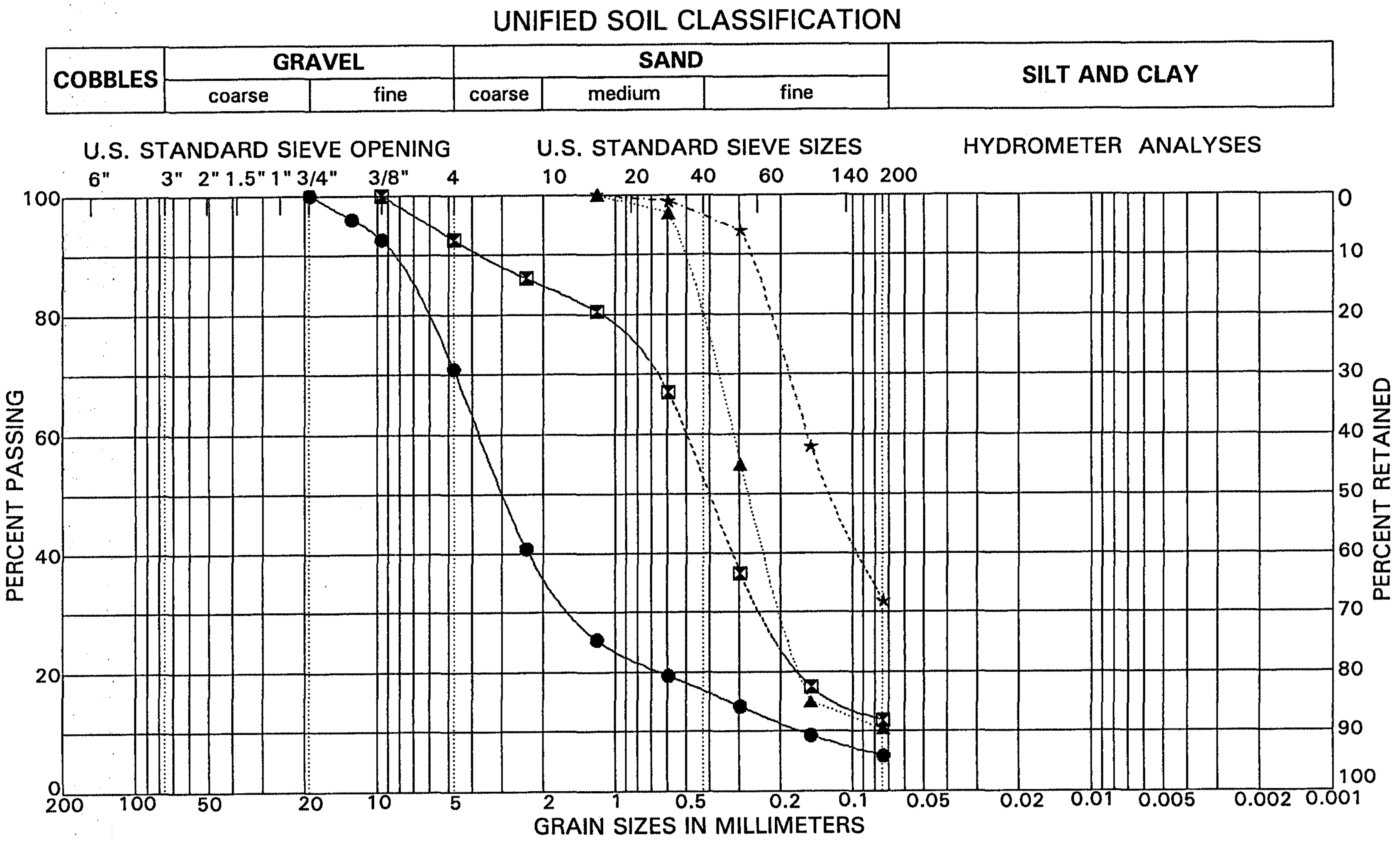
Woodward-Clyde Consultants

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT
Project No. 973017NB
1/8/98 GUAD_SV1 GUADE

GRAIN SIZE CURVES

Fig.

Woodward-Clyde Consultants

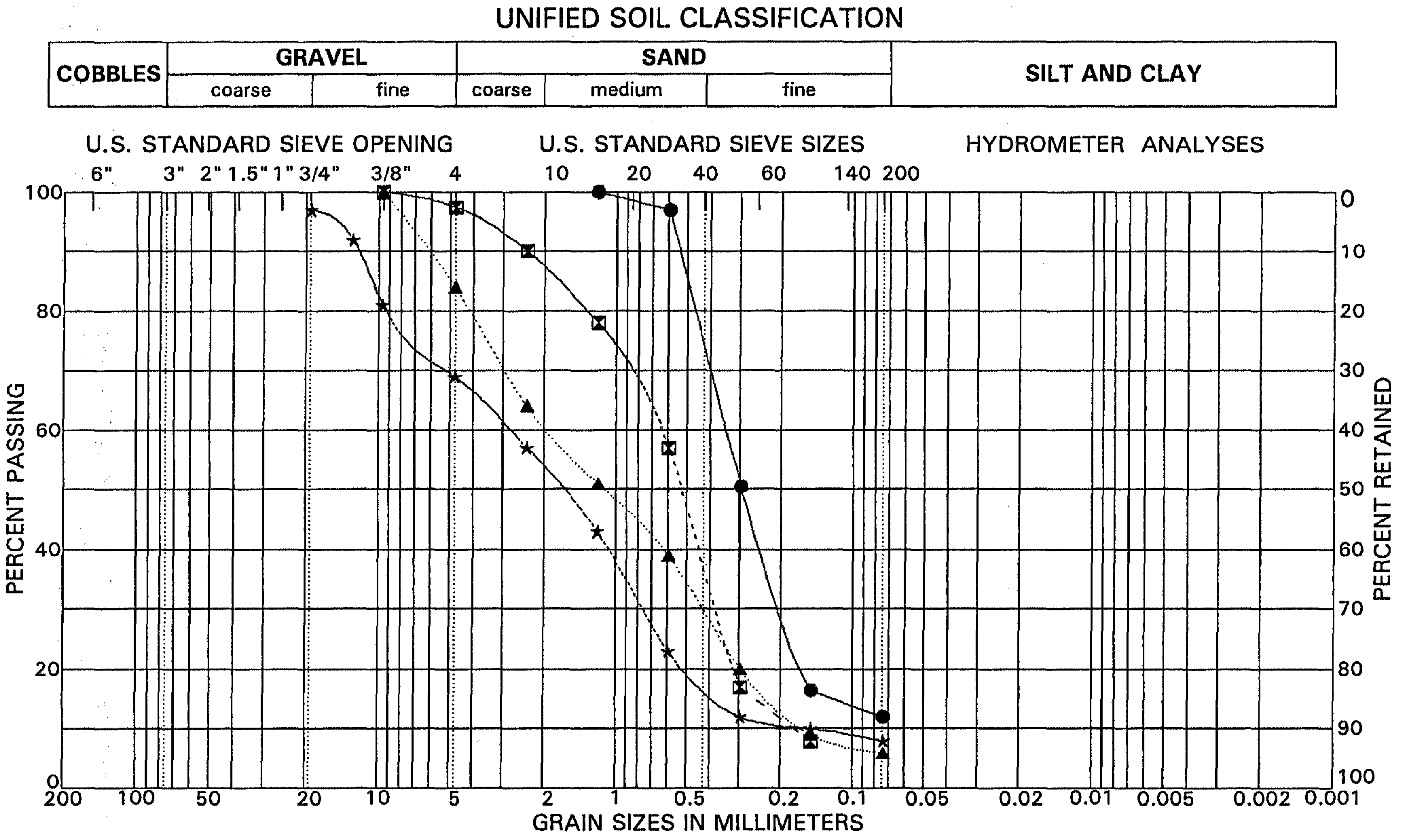


NOTE: Approximate reproduction of curves from original report graphics.

Boring Number	Sample Number	Depth (feet)	Symbol	LL	PI	Station (m)	Offset (m:pos = east)
AA-4	5	19	●			14+160	-119
GRIM-1		35	⊠			6+130	38
GRIM-12		4	▲			6+498	95
GRIM-13		25	★			6+531	114

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT
Project No. 973017NB

1/8/98 GUAD_SV1 GUADE



NOTE: Approximate reproduction of curves from original report graphics.

Boring Number	Sample Number	Depth (feet)	Symbol	LL	PI	Station (m)	Offset (m:pos = east)
GRIM-2		31	●			6+206	45
GRIM-2		36	☒			6+206	45
GRIM-3		28	▲			6+281	98
HHP-3		46	★			10+130	-31

GRAIN SIZE CURVES

Fig.

Woodward-Clyde Consultants

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT
Project No. 973017NB

1/8/98 GUAD_SV1 GUADE

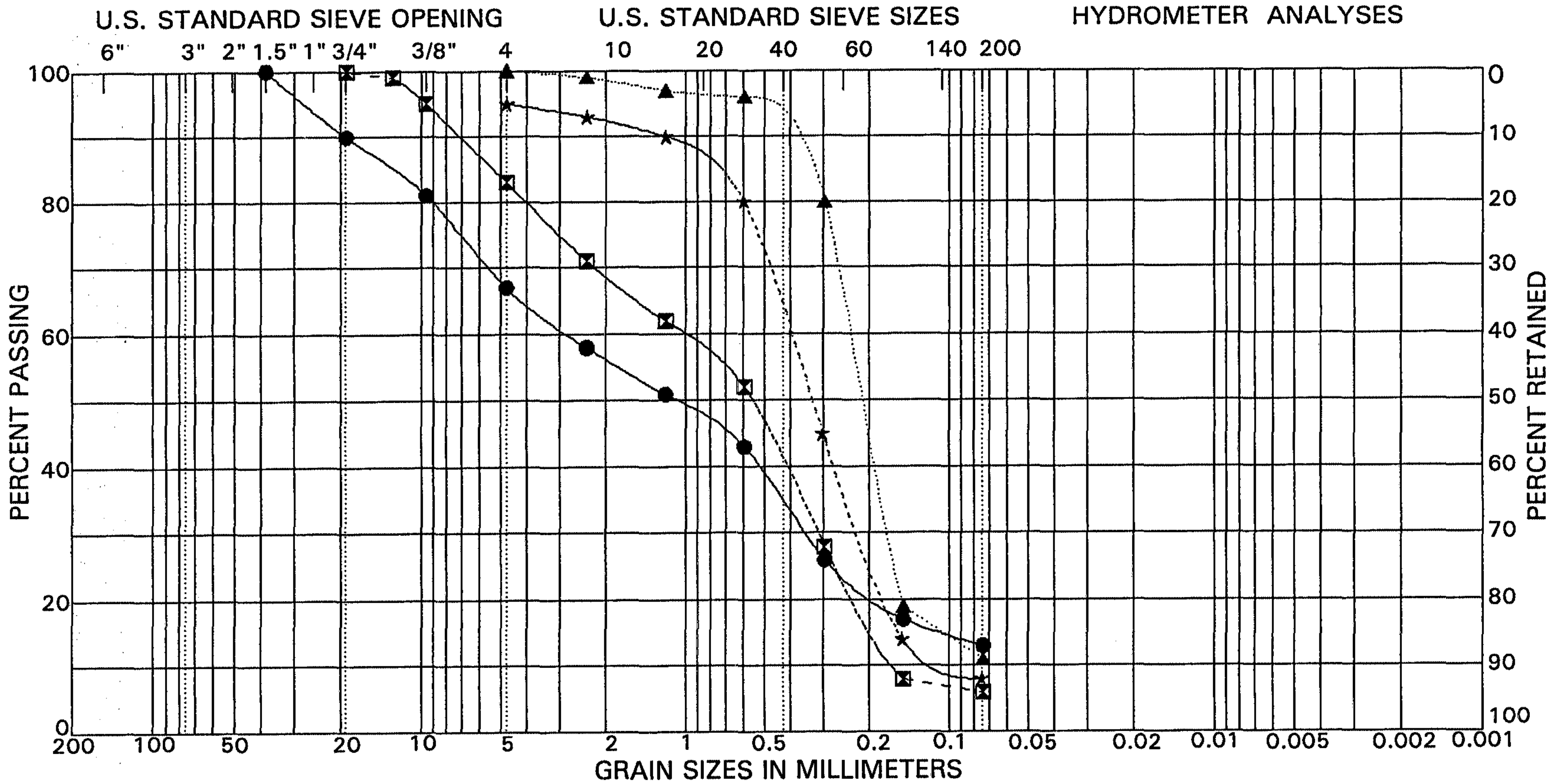
GRAIN SIZE CURVES

Fig.

Woodward-Clyde Consultants

UNIFIED SOIL CLASSIFICATION

COBBLES	GRAVEL		SAND			SILT AND CLAY
	coarse	fine	coarse	medium	fine	



NOTE: Approximate reproduction of curves from original report graphics.

Boring Number	Sample Number	Depth (feet)	Symbol	LL	PI	Station (m)	Offset (m:pos=east)
HHP-3		56	●			10+130	-31
HHP-4		61	☒			10+128	-52
HHP-5		51	▲			10+147	-69
SDB-16	6	21	★			16+280	-89

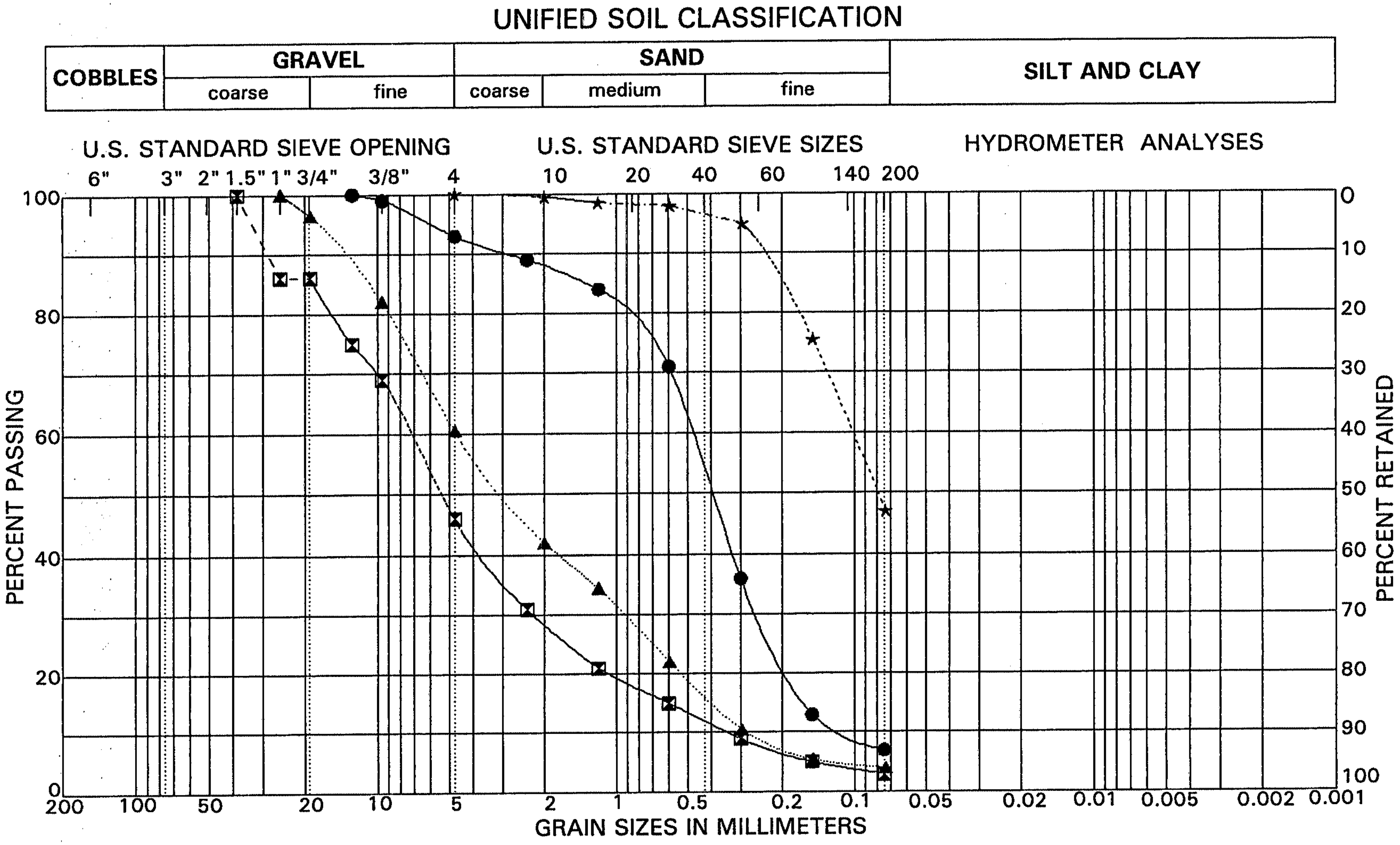
LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT

Project No. 973017NB

GRAIN SIZE CURVES

Fig.

Woodward-Clyde Consultants



NOTE: Approximate reproduction of curves from original report graphics.

Boring Number	Sample Number	Depth (feet)	Symbol	LL	PI	Station (m)	Offset (m:pos = east)
SDB-16	7	26	●			16 + 280	-89
SDB-9	7	31	☒			16 + 278	-13
SJIA-11		3	▲			15 + 368	-104
SJIA-19		41	★			15 + 666	53

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT
Project No. 9730017NB

1/8/98 GUAD_SV1 GUADE

GRAIN SIZE CURVES

Fig.

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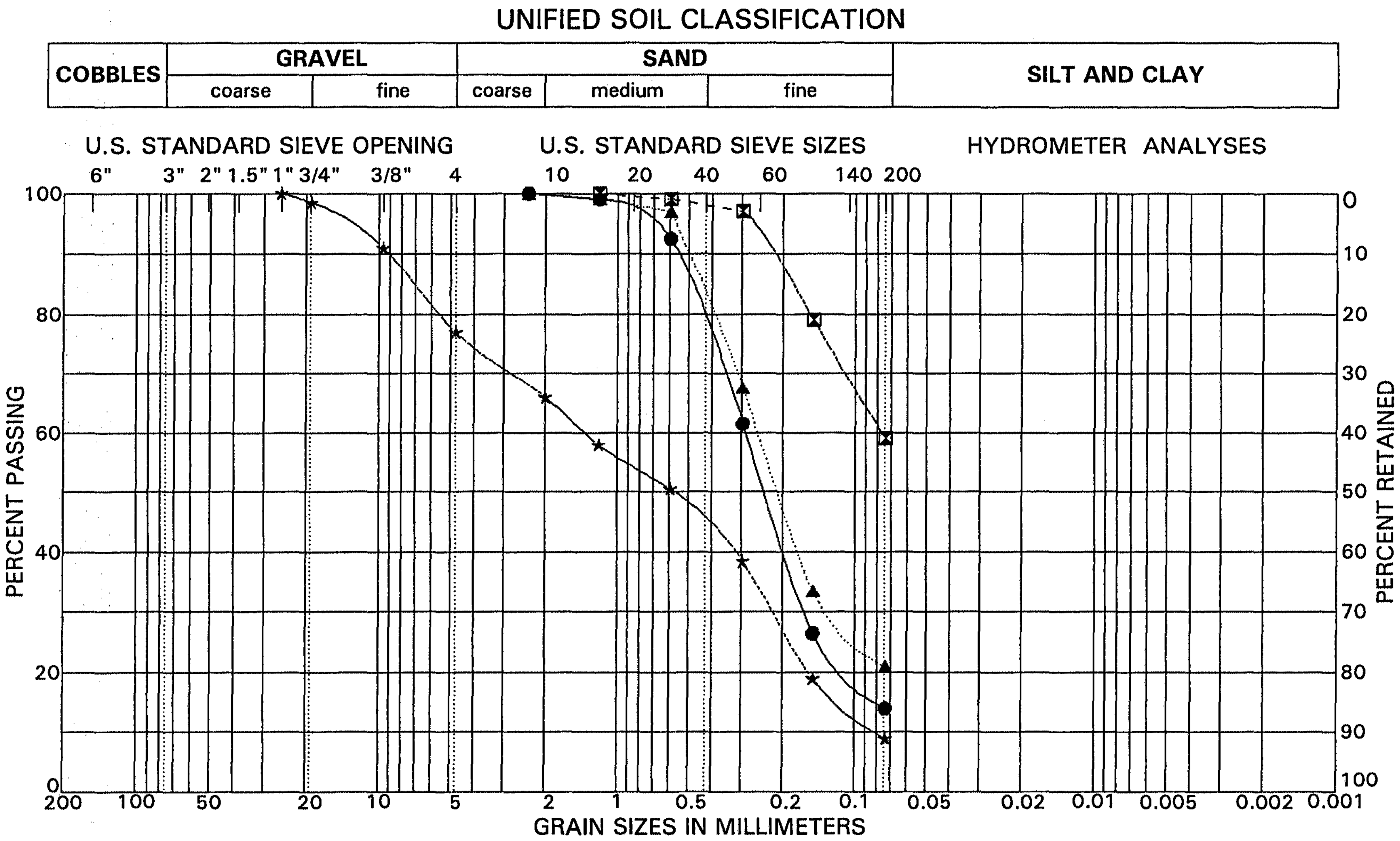


NOTE: Approximate reproduction of curves from original report graphics.

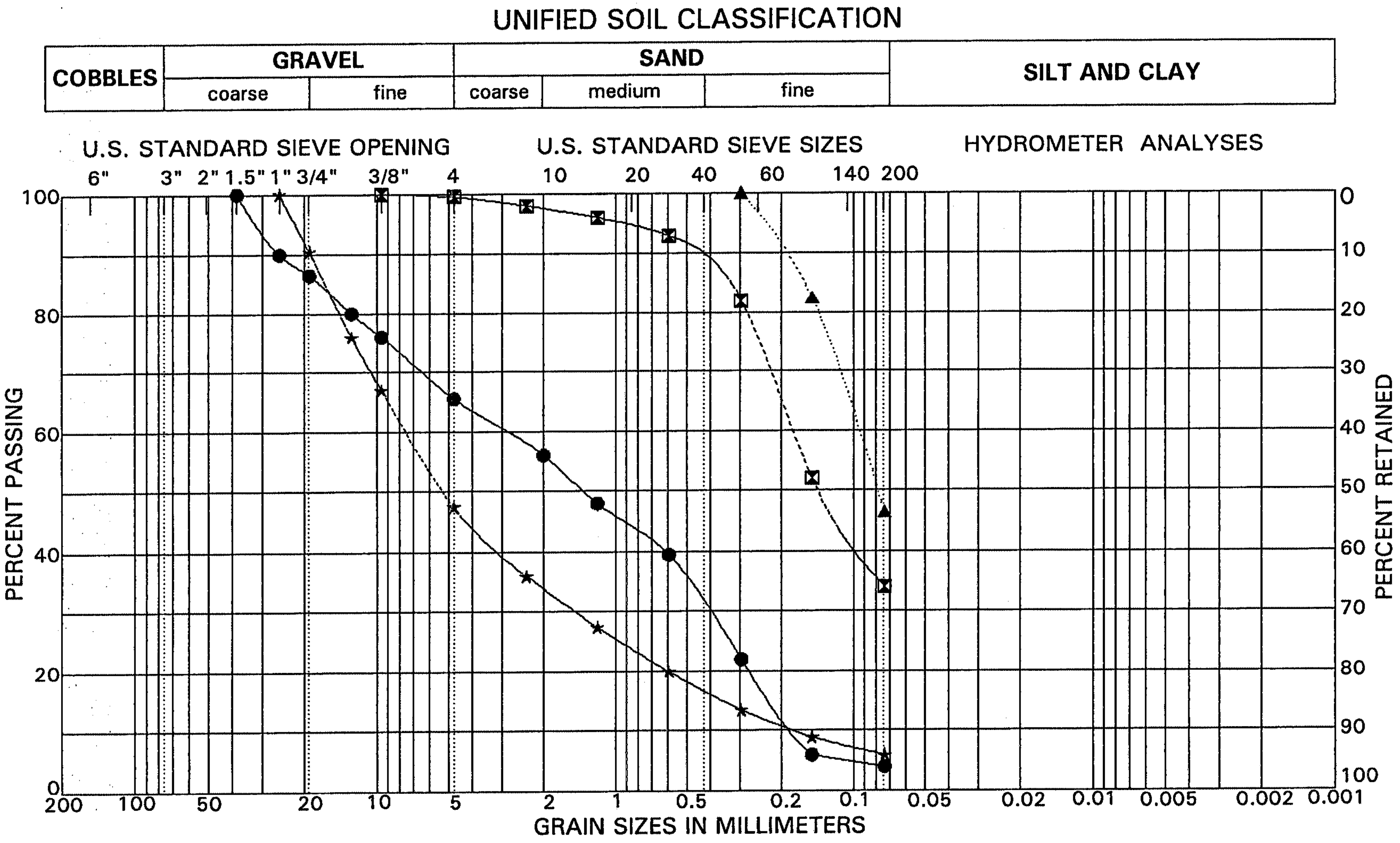
Boring Number	Sample Number	Depth (feet)	Symbol	LL	PI	Station (m)	Offset (m:pos = east)
SJIA-44		9	●			14+989	-53
SJIA-44		26	☒			14+989	-53
SJIA-46		9	▲			15+093	58
SJIA-5		18	★			15+136	-106

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT
Project No. 973017NB
1/8/98 GUAD_SV1 GUADE

GRAIN SIZE CURVES

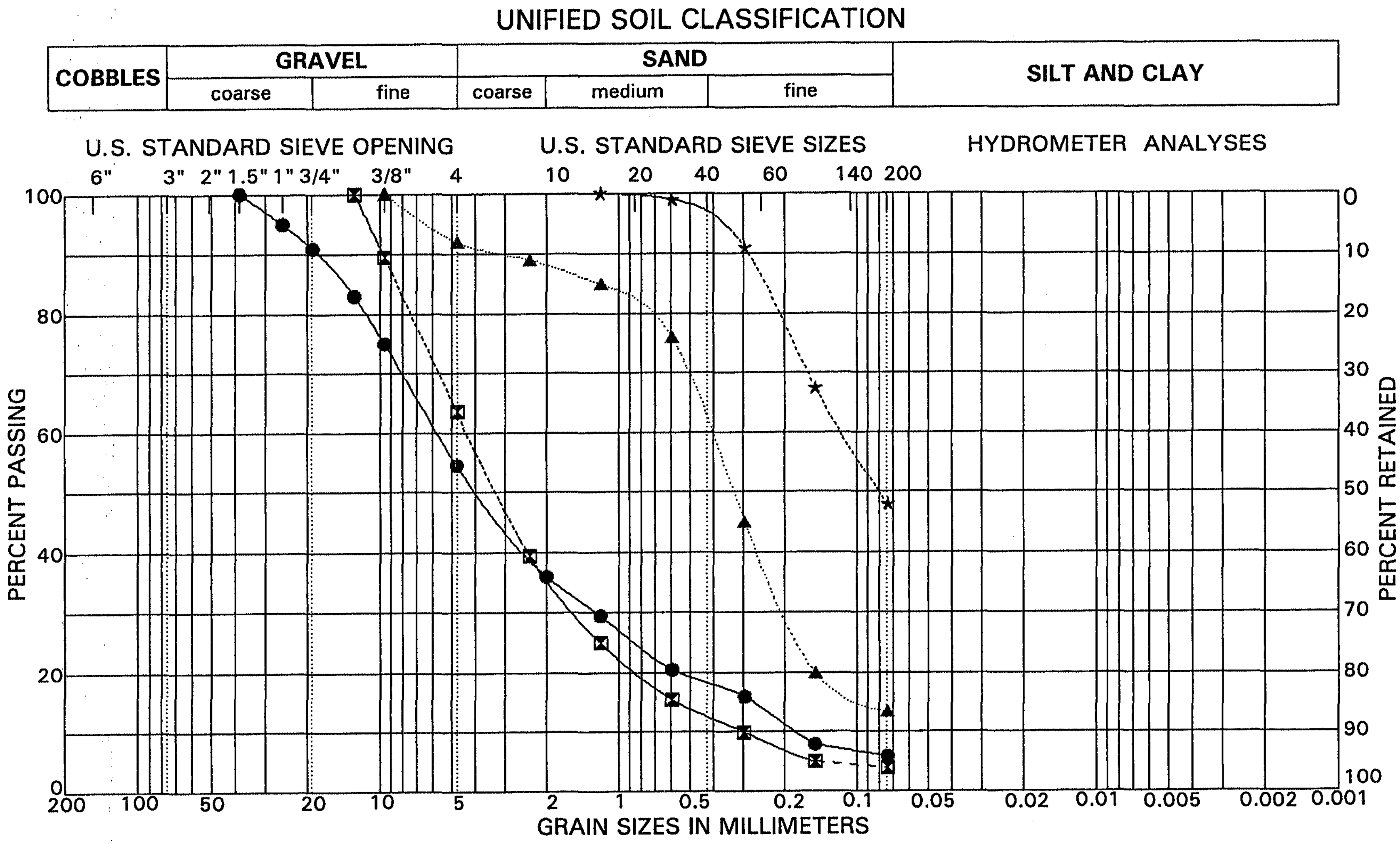
Woodward-Clyde Consultants

Fig.



NOTE: Approximate reproduction of curves from original report graphics.

Boring Number	Sample Number	Depth (feet)	Symbol	LL	PI	Station (m)	Offset (m:pos = east)
SJIA-5		23	●			15 + 136	-106
SJIA-54		13	⊠			14 + 696	-7
SJIA-54		36	▲			14 + 696	-7
SJIA-54		46	★			14 + 696	-7



NOTE: Approximate reproduction of curves from original report graphics.

Boring Number	Sample Number	Depth (feet)	Symbol	LL	PI	Station (m)	Offset (m:pos=east)
SJIA-8		23	●			15+263	-106
SJIA-S10		14	☒			14+046	-85
SJIA-S11		16	▲			13+982	-46
SJIA-S2		4	★			15+260	-52

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT
Project No. 973017NB

1/8/98 GUAD_SV1 GUADE

GRAIN SIZE CURVES

Fig.

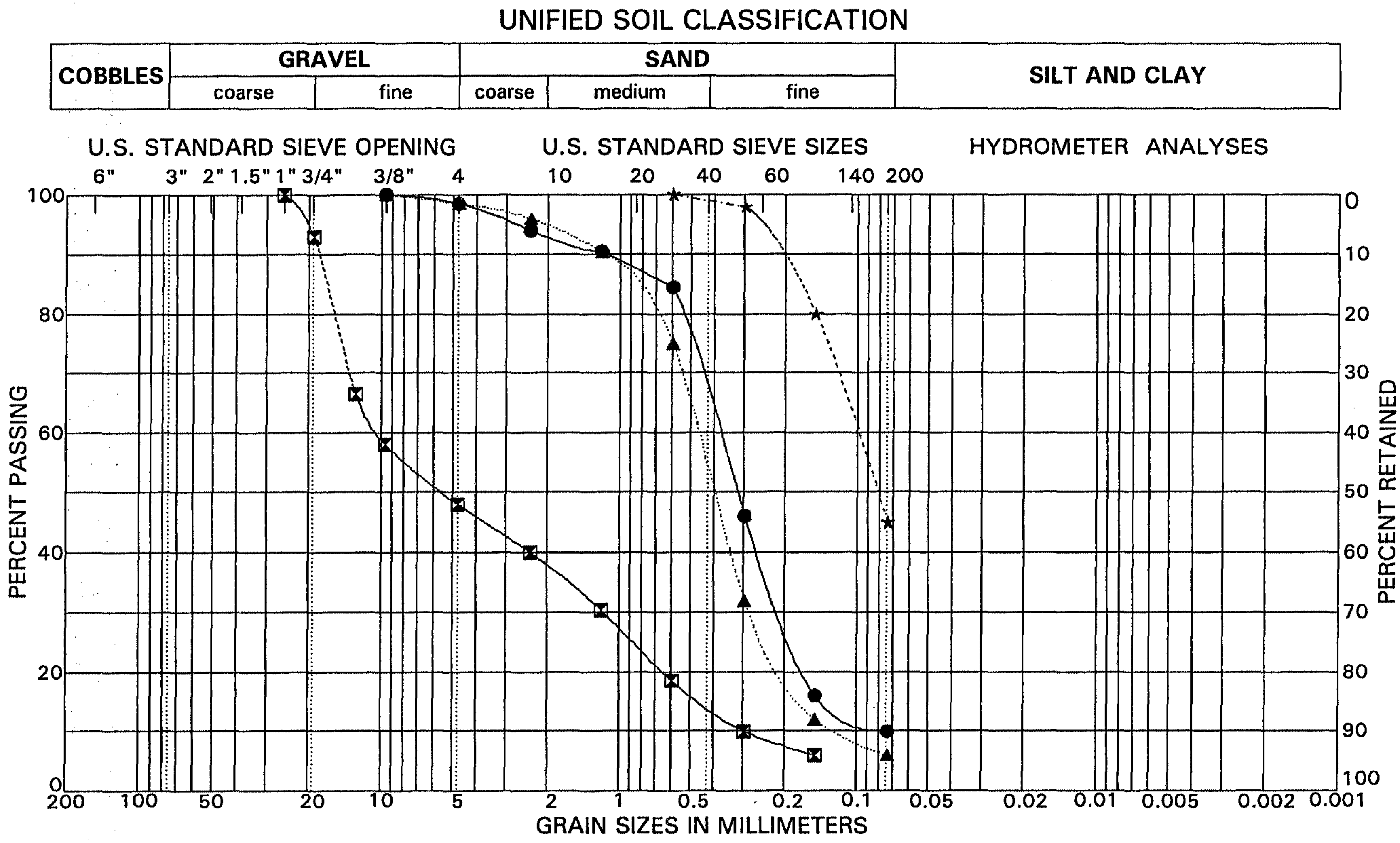
Woodward-Clyde Consultants

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT
Project No. 973017NB
1/8/98 GUAD_SV1 GUADE

GRAIN SIZE CURVES

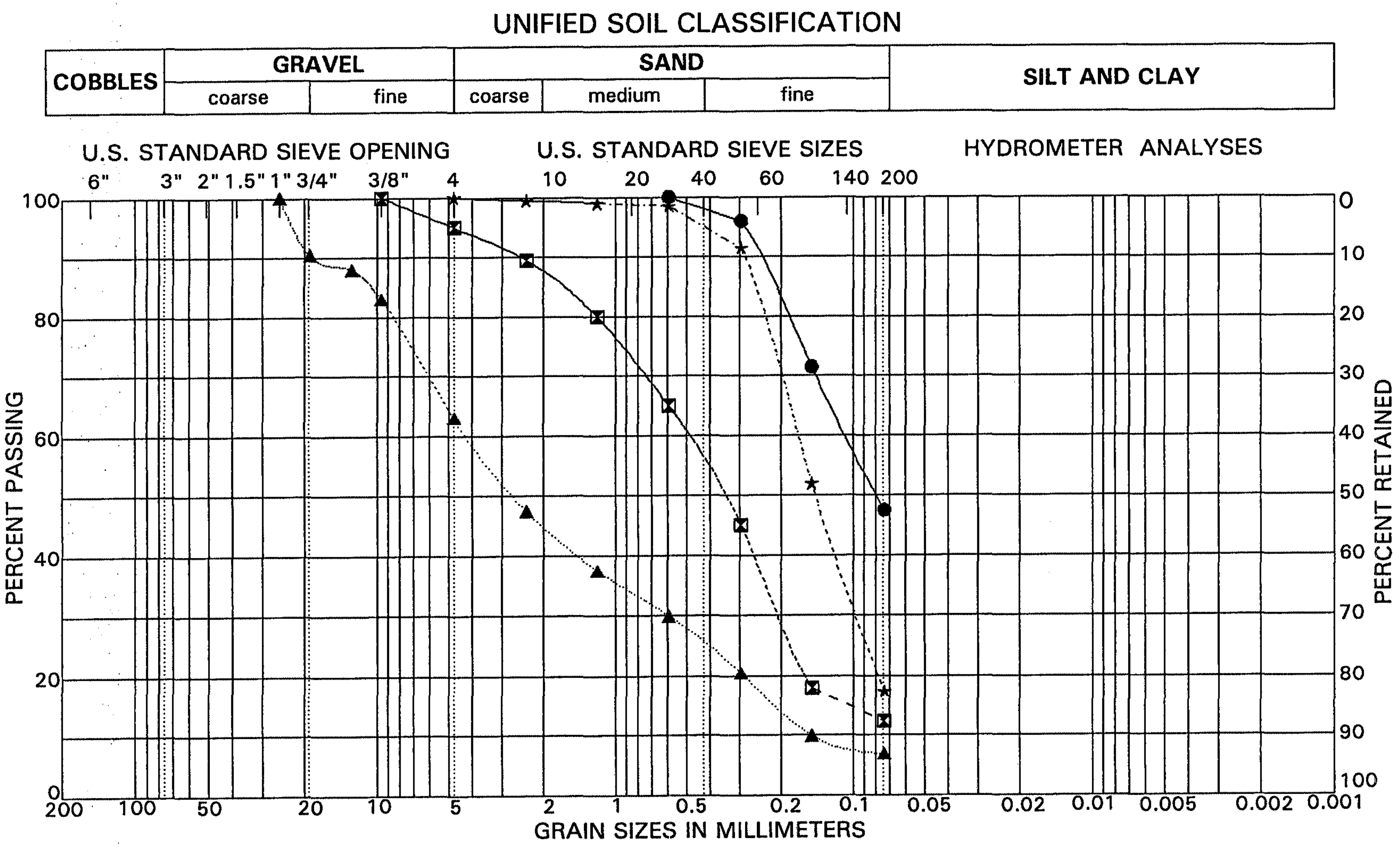
Fig.

Woodward-Clyde Consultants



NOTE: Approximate reproduction of curves from original report graphics.

Boring Number	Sample Number	Depth (feet)	Symbol	LL	PI	Station (m)	Offset (m:pos = east)
TDB-1		34	●			9+249	-80
TDB-1		44	☒			9+249	-80
TDB-2		51	▲			9+247	-47
TDB-2		56	★			9+247	-47



NOTE: Approximate reproduction of curves from original report graphics.

Boring Number	Sample Number	Depth (feet)	Symbol	LL	PI	Station (m)	Offset (m:pos = east)
TDB-3		11	●			9 + 250	86
TDB-3		36	☒			9 + 250	86
TDB-3		46	▲			9 + 250	86
TDB-4		42	★			9 + 242	41

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT
Project No. 9730177NB
1/8/98 GUAD_SV1 GUADE

GRAIN SIZE CURVES

Fig.

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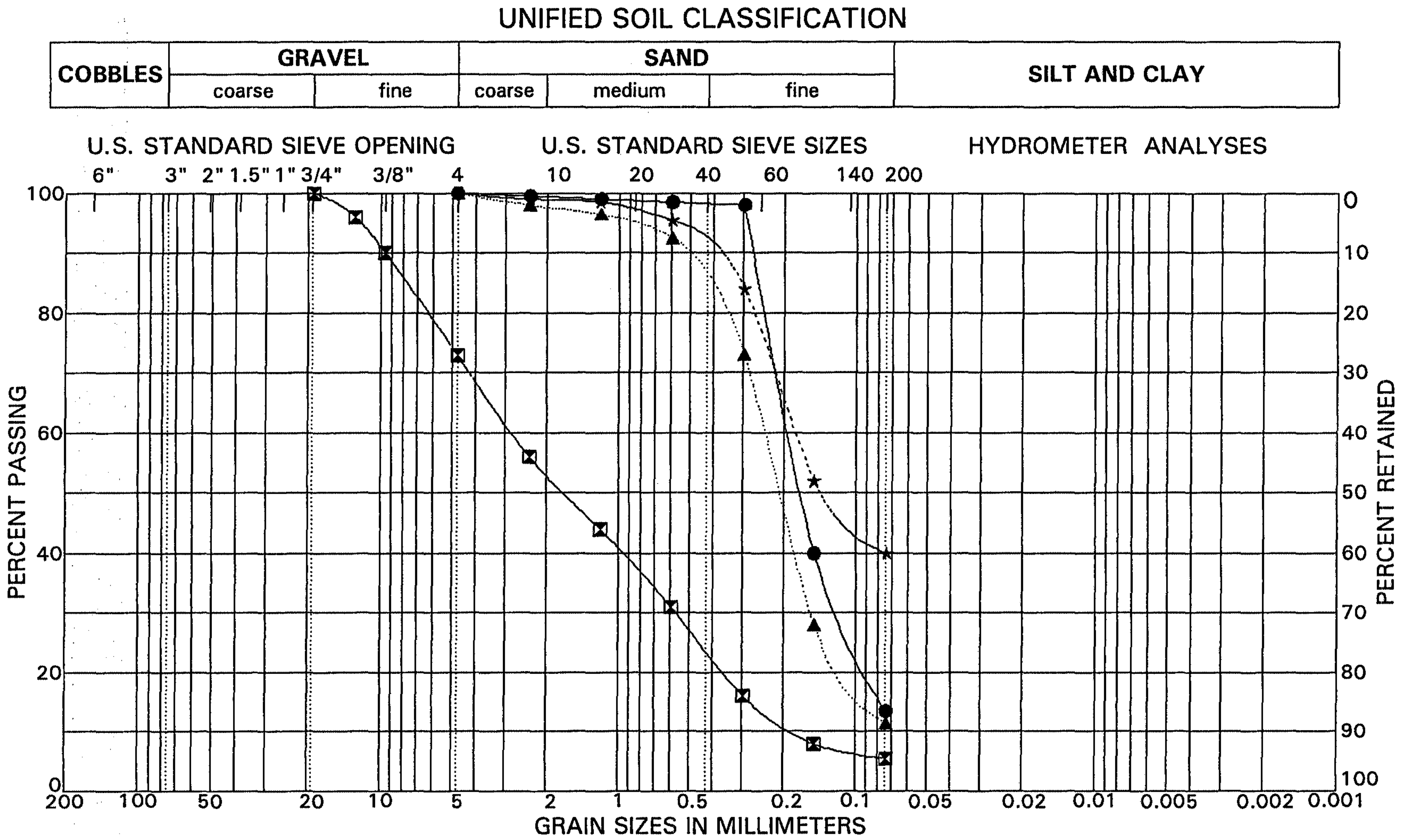
LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT
Project No. 973017NB

1/8/98 GUAD_SV1 GUADE

GRAIN SIZE CURVES

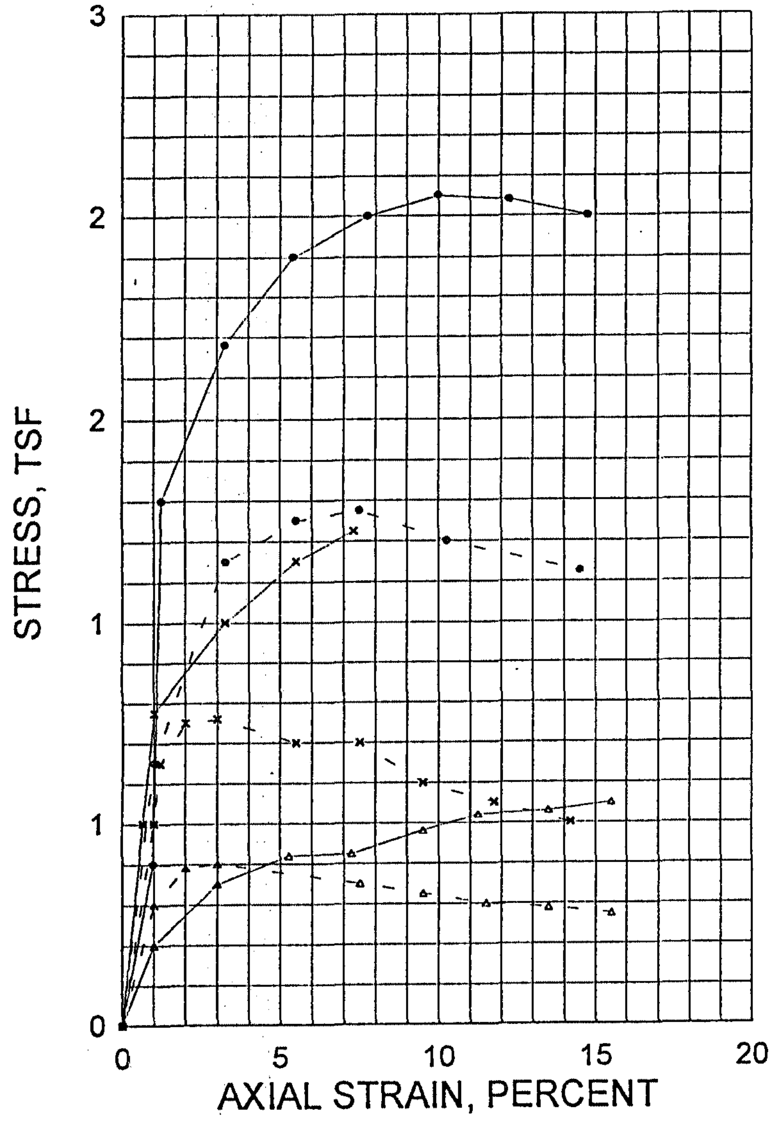
Woodward-Clyde Consultants

Fig.

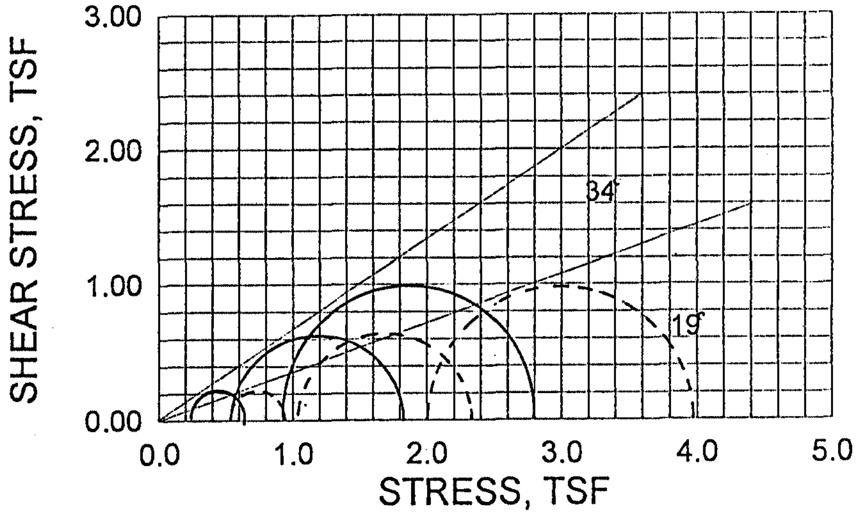


NOTE: Approximate reproduction of curves from original report graphics.

Boring Number	Sample Number	Depth (feet)	Symbol	LL	PI	Station (m)	Offset (m:pos = east)
TDB-4		49	●			9+242	41
TDB-4		61	☒			9+242	41
TDB-5		10	▲			9+247	11
TDB-5		26	★			9+247	11



SPECIMEN NO.	INITIAL MOISTURE CONTENT (%)	INITIAL DRY DENSITY (PCF)	CONFINING PRESSURE (TSF)	DEVIATOR STRESS AT FAILURE (TSF)	PORE PRESSURE AT FAILURE (TSF)
● B3-2-2	26	97	1.95	2.00	1.10
X B3-2-1	30	95	1.00	1.20	0.50
Δ B3-2-3	25	101	0.50	0.55	0.30



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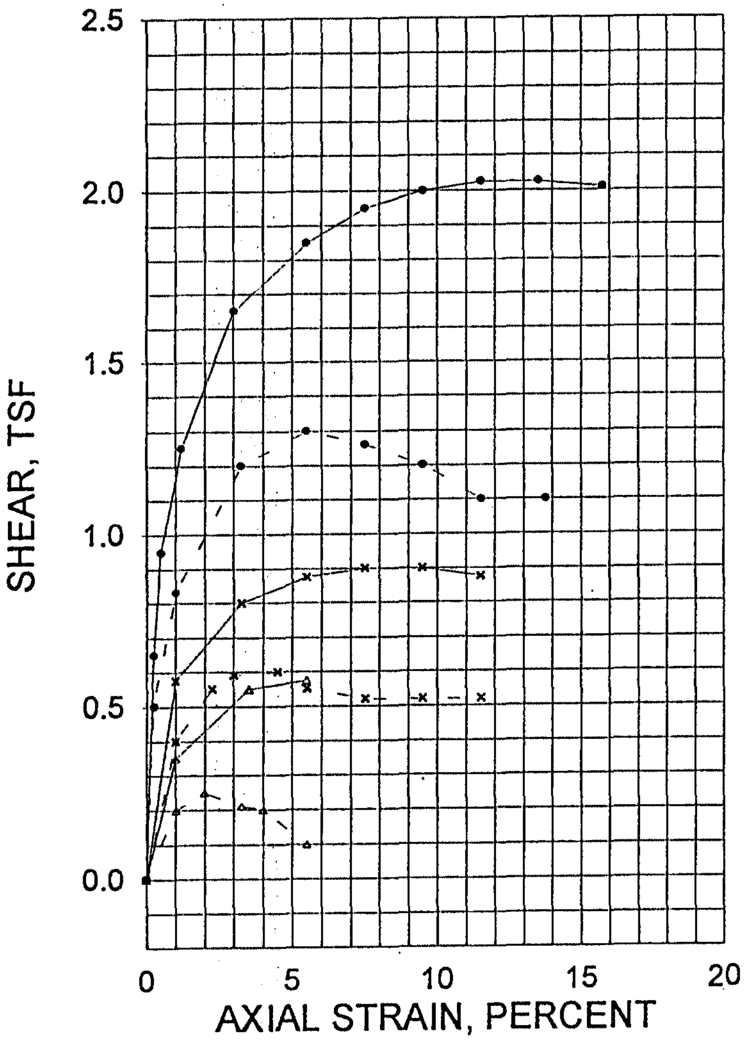
DEVIATOR STRESS, $\sigma_1 - \sigma_3$ - SOLID LINES
PORE WATER PRESSURE, U - DASH LINES

TYPE OF SPECIMEN: UNDISTURBED
TYPE OF TEST: C-U

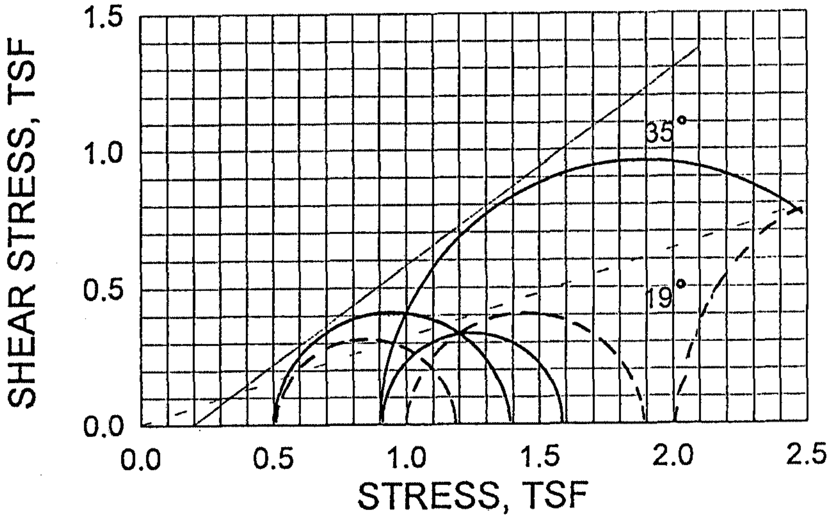
EFFECTIVE STRESS - SOLID LINES
TOTAL STRESS - DASH LINES

Project No. 95-973017NB.00	Lower Guadalupe River Flood Control Project (Project No. 301511)	TRIAXIAL COMPRESSION TEST RESULTS Re-Plotted from Archived Microfiche Report Soil Investigation for the proposed Guadalupe River Project Reaches 1 and 2, Santa Clara County, 1960 (Woodward-Clyde Project No. 4246)	Figure
05/29/99	Santa Clara County, California		

TEMP001



SPECIMEN NO.	INITIAL MOISTURE CONTENT (%)	INITIAL DRY DENSITY (PCF)	CONFINING PRESSURE (TSF)	DEVIATOR STRESS AT FAILURE (TSF)	PORE PRESSURE AT FAILURE (TSF)
● 38-3-1	31	88	2.00	2.00	+1.10
X 38-3-2	23	79	1.00	0.90	+0.50
Δ 38-3-3	38	83	0.50	0.70	-0.40



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DEVIATOR STRESS, $\sigma_1 - \sigma_3$ - SOLID LINES
PORE WATER PRESSURE, U - DASH LINES

TYPE OF SPECIMEN: UNDISTURBED
TYPE OF TEST: C-U

EFFECTIVE STRESS - SOLID LINES
TOTAL STRESS - DASH LINES

Project No. 95-973017NB.00	Lower Guadalupe River Flood Control Project (Project No. 301511)
05/29/99	Santa Clara County, California

TRIAXIAL COMPRESSION TEST RESULTS

Re-Plotted from Archived Microfiche Report

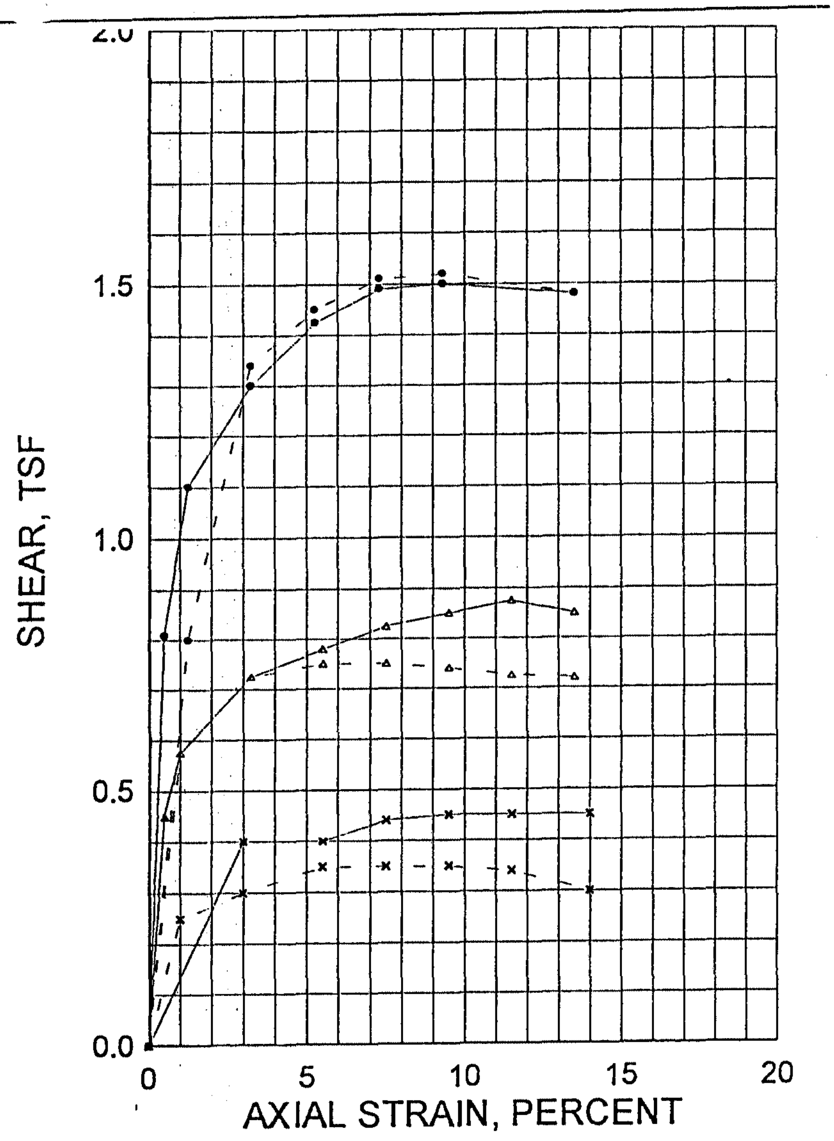
Soil Investigation for the proposed Guadalupe River Project

Reaches 1 and 2, Santa Clara County, 1960

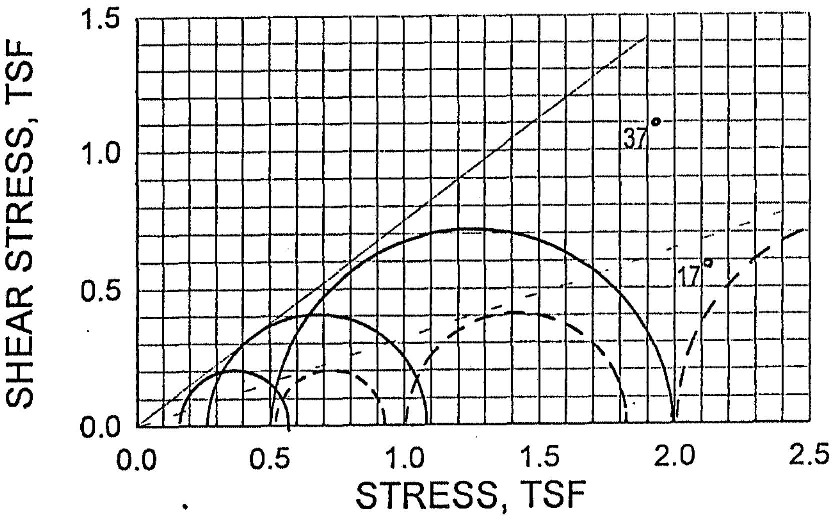
(Woodward-Clyde Project No. 4246)

Figure

TEMP001



SPECIMEN NO.	INITIAL MOISTURE CONTENT (%)	INITIAL DRY DENSITY (PCF)	CONFINING PRESSURE (TSF)	DEVIATOR STRESS AT FAILURE (TSF)	PORE PRESSURE AT FAILURE (TSF)
● 35-3-3	51	70	2.00	1.50	1.50
Δ 35-3-2	56	67	1.00	0.85	0.75
× 35-3-1	88	49	0.50	0.45	0.35



DEVIATOR STRESS, $\sigma_1 - \sigma_3$ - SOLID LINES
PORE WATER PRESSURE, U - DASH LINES

TYPE OF SPECIMEN: UNDISTURBED
TYPE OF TEST: C-U

EFFECTIVE STRESS - SOLID LINES
TOTAL STRESS - DASH LINES

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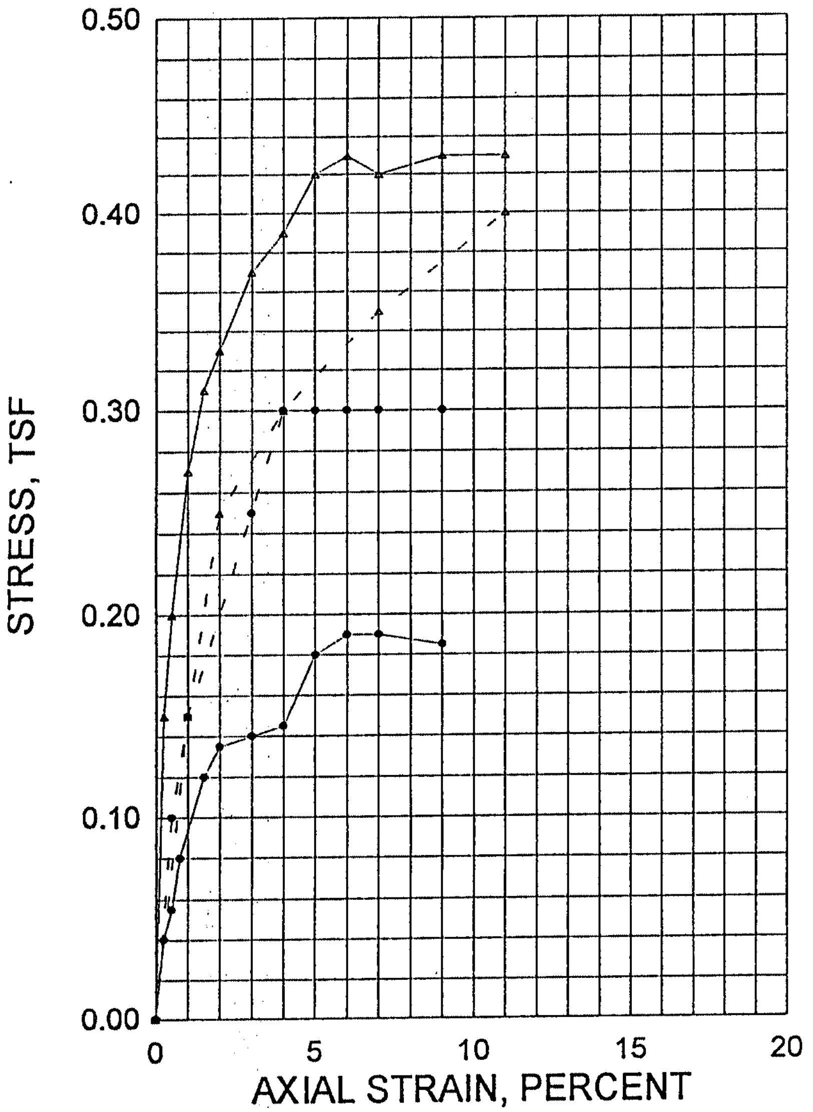
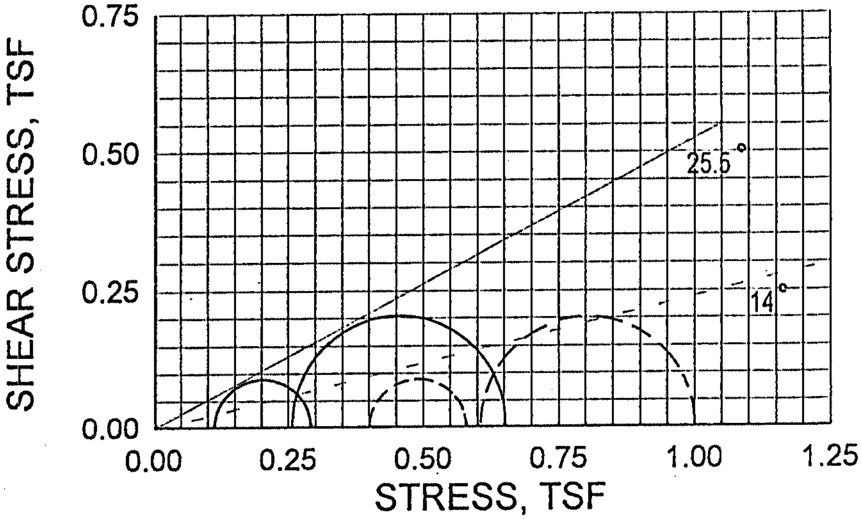
Project No. 95-973017NB.00	Lower Guadalupe River Flood Control Project (Project No. 301511)	**TRIAXIAL COMPRESSION TEST RESULTS** Re-Plotted from Archived Microfiche Report Soil Investigation for the proposed Guadalupe River Project Reaches 1 and 2, Santa Clara County, 1960 (Woodward-Clyde Project No. 4246)	Figure
05/29/99	Santa Clara County, California		

TEMP001



SPECIMEN NO.	INITIAL MOISTURE CONTENT (%)	INITIAL DRY DENSITY (PCF)	CONFINING PRESSURE (TSF)	DEVIATOR STRESS AT FAILURE (TSF)	PORE PRESSURE AT FAILURE (TSF)
△ 16-2-1B	90	50	0.60	0.42	0.35
● 16-2-1A	90	50	0.40	0.19	0.30



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DEVIATOR STRESS, $\sigma_1 - \sigma_3$ - SOLID LINES
PORE WATER PRESSURE, U - DASH LINES

TYPE OF SPECIMEN: UNDISTURBED
TYPE OF TEST: C-U

EFFECTIVE STRESS - SOLID LINES
TOTAL STRESS - DASH LINES

Project No.
95-973017NB.00

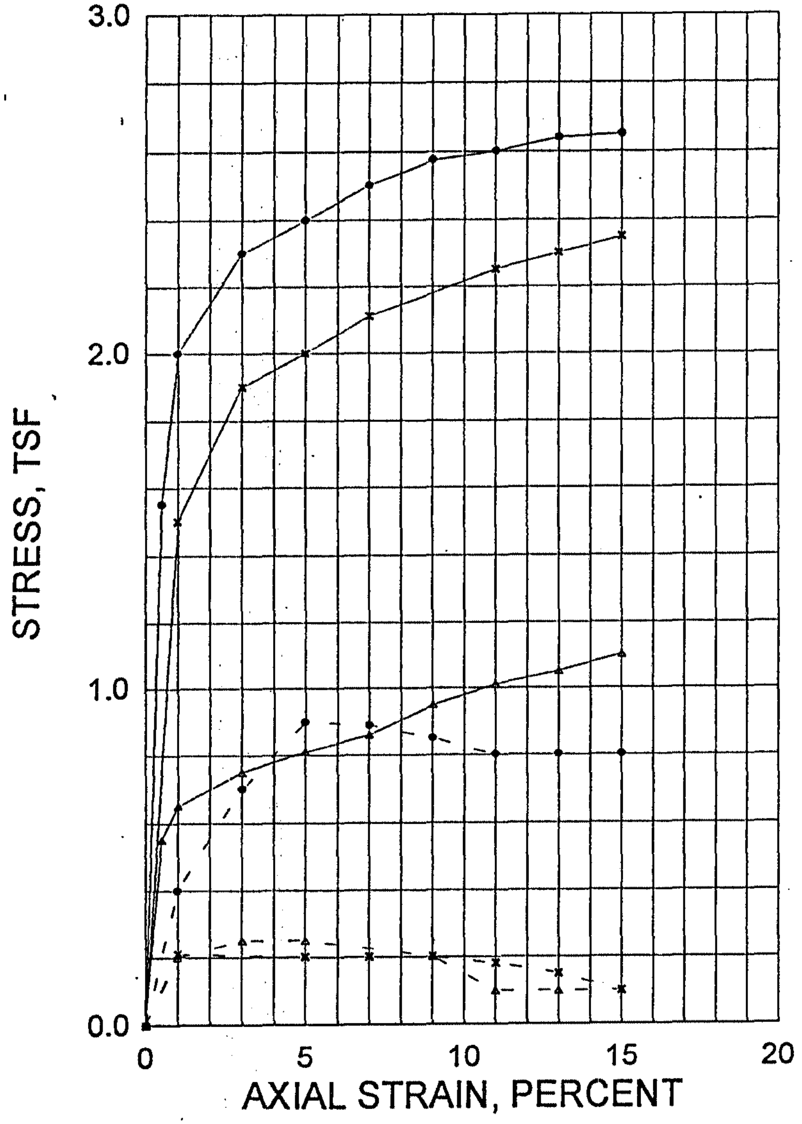
05/29/99

Lower Guadalupe River Flood Control Project
(Project No. 301511)
Santa Clara County, California

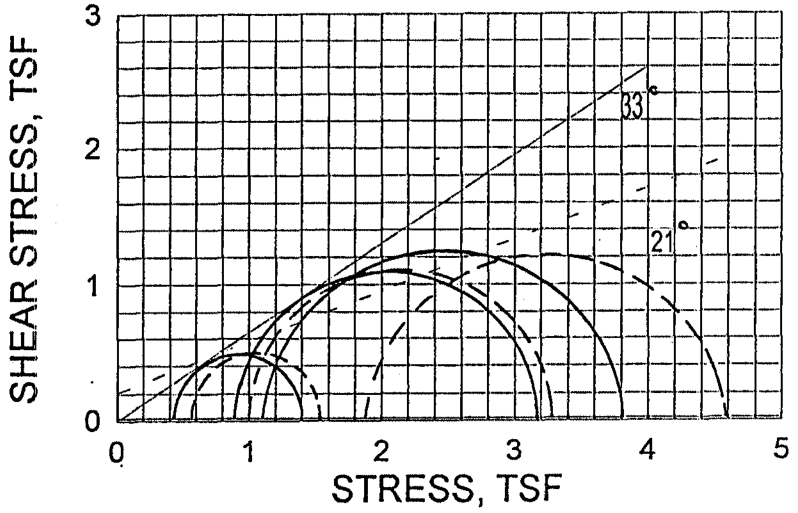
TRIAXIAL COMPRESSION TEST RESULTS
Re-Plotted from Archived Microfiche Report
Soil Investigation for the proposed Guadalupe River Project
Reaches 1 and 2, Santa Clara County, 1960
(Woodward-Clyde Project No. 4246)

Figure

TEMP001



SPECIMEN NO.	INITIAL MOISTURE CONTENT (%)	INITIAL DRY DENSITY (PCF)	CONFINING PRESSURE (TSF)	DEVIATOR STRESS AT FAILURE (TSF)	PORE PRESSURE AT FAILURE (TSF)
● A-1	17.1	106.3	1.98	2.69	0.80
X A-3	17.8	106.3	1.00	2.33	
△ A-2	16.9	106.3	0.50	1.70	



DEVIATOR STRESS, $\sigma_1 - \sigma_3$ - SOLID LINES
PORE WATER PRESSURE, u - DASH LINES

TYPE OF SPECIMEN: UNDISTURBED
TYPE OF TEST: C-U

EFFECTIVE STRESS - SOLID LINES
TOTAL STRESS - DASH LINES

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Project No. 95-973017NB.00	Lower Guadalupe River Flood Control Project (Project No. 301511)
05/29/99	Santa Clara County, California

TRIAXIAL COMPRESSION TEST RESULTS

Re-Plotted from Archived Microfiche Report

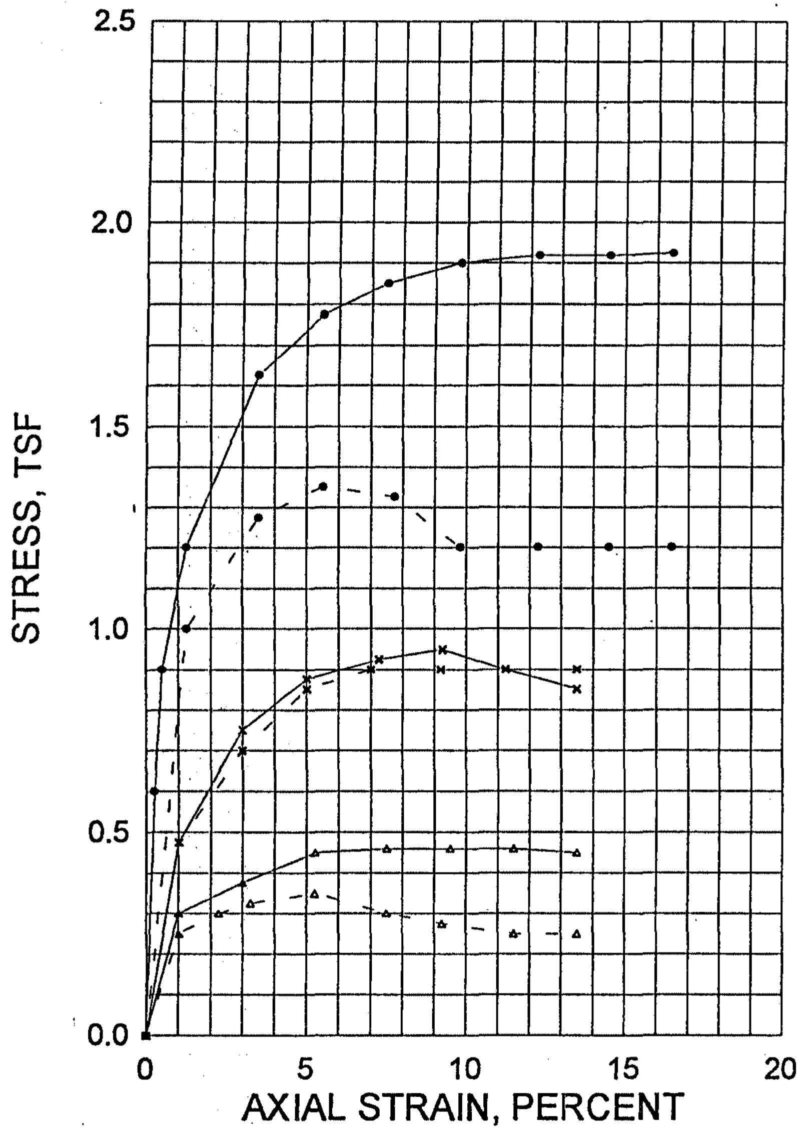
Soil Investigation for the proposed Guadalupe River Project

Reaches 1 and 2, Santa Clara County, 1960

(Woodward-Clyde Project No. 4246)

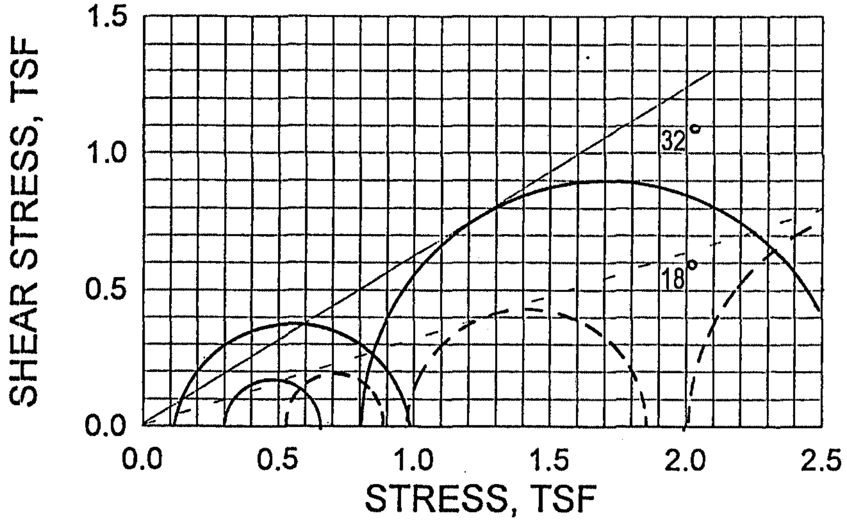
Figure

TEMP001



DEVIATOR STRESS, $\sigma_1 - \sigma_3$ - SOLID LINES
PORE WATER PRESSURE, U - DASH LINES

SPECIMEN NO.	INITIAL MOISTURE CONTENT (%)	INITIAL DRY DENSITY (PCF)	CONFINING PRESSURE (TSF)	DEVIATOR STRESS AT FAILURE (TSF)	PORE PRESSURE AT FAILURE (TSF)
● 31-3-4	34	87	2.00	1.93	1.20
× 31-3-2	66	57	1.00	0.93	0.90
△ 31-3-3	37	83	0.50	0.45	0.25



TYPE OF SPECIMEN: UNDISTURBED
TYPE OF TEST: C-U

EFFECTIVE STRESS - SOLID LINES
TOTAL STRESS - DASH LINES

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Project No.
95-973017NB.00
05/29/99

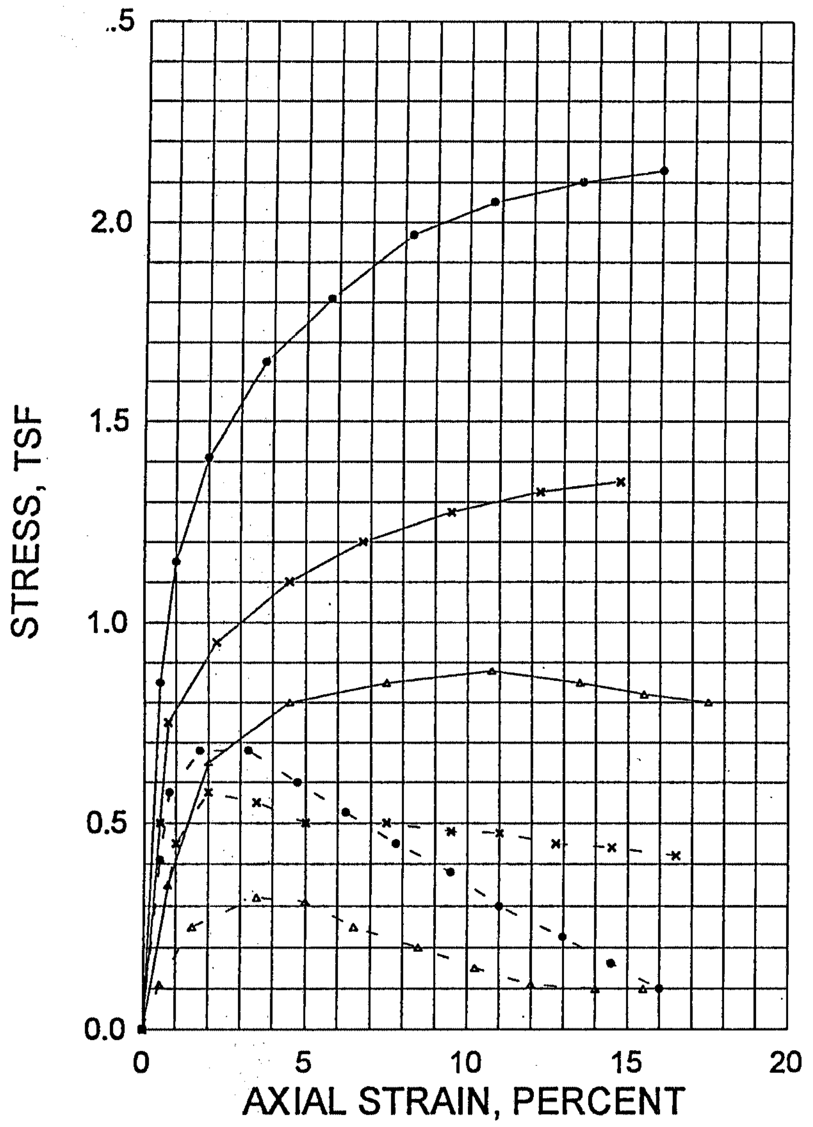
Lower Guadalupe River Flood Control Project
(Project No. 301511)
Santa Clara County, California

TRIAXIAL COMPRESSION TEST RESULTS

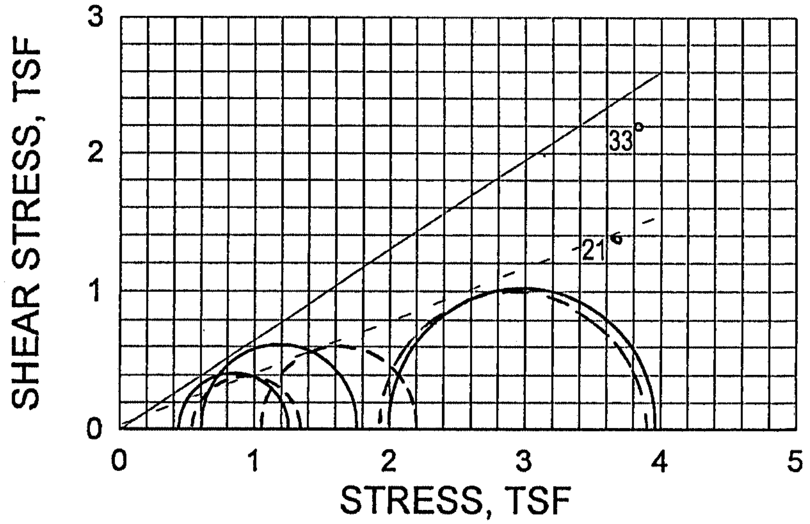
Re-Plotted from Archived Microfiche Report
Soil Investigation for the proposed Guadalupe River Project
Reaches 1 and 2, Santa Clara County, 1960
(Woodward-Clyde Project No. 4246)

Figure

TEMP001



SPECIMEN NO.	INITIAL MOISTURE CONTENT (%)	INITIAL DRY DENSITY (PCF)	CONFINING PRESSURE (TSF)	DEVIATOR STRESS AT FAILURE (TSF)	PORE PRESSURE AT FAILURE (TSF)
● 11-3-3	26	100	1.90	2.10	0.15
× 11-3-~~4~~1	23	104	1.00	1.55	0.45
△ 11-3-2	33	90	0.50	0.85	0.10



DEVIATOR STRESS, $\sigma_1 - \sigma_3$ - SOLID LINES
PORE WATER PRESSURE, U - DASH LINES

TYPE OF SPECIMEN: UNDISTURBED
TYPE OF TEST: C-U

EFFECTIVE STRESS - SOLID LINES
TOTAL STRESS - DASH LINES

C:\CADDATA\

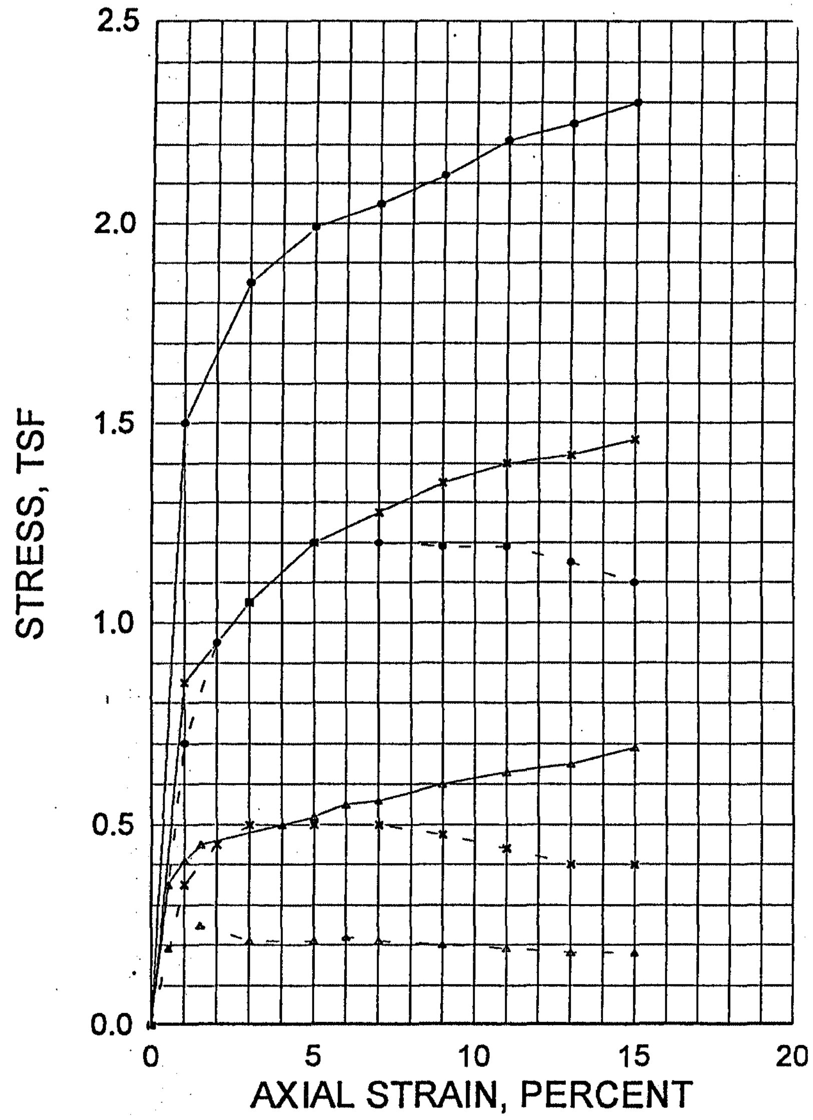
Project No. 95-973017NB.00	Lower Guadalupe River Flood Control Project (Project No. 301511)
05/29/99	Santa Clara County, California

TEMP001

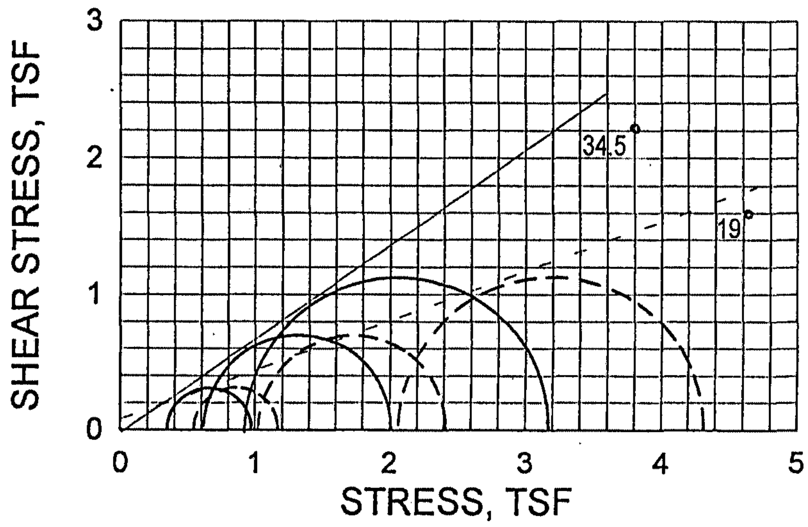
TRIAXIAL COMPRESSION TEST RESULTS

Re-Plotted from Archived Microfiche Report
Soil Investigation for the proposed Guadalupe River Project
Reaches 1 and 2, Santa Clara County, 1960
(Woodward-Clyde Project No. 4246)

Figure



SPECIMEN NO.	INITIAL MOISTURE CONTENT (%)	INITIAL DRY DENSITY (PCF)	CONFINING PRESSURE (TSF)	DEVIATOR STRESS AT FAILURE (TSF)	PORE PRESSURE AT FAILURE (TSF)
● B-2	20.2	100.0	2.00	2.30	1.10
× B-1	19.5	100.5	1.00	1.85	0.80
△ B-3	20.3	100.0	0.50	0.70	0.20



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DEVIATOR STRESS, $\sigma_1 - \sigma_3$ - SOLID LINES
PORE WATER PRESSURE, U - DASH LINES

TYPE OF SPECIMEN: UNDISTURBED
TYPE OF TEST: C-U

EFFECTIVE STRESS - SOLID LINES
TOTAL STRESS - DASH LINES

Project No.
95-973017NB.00

05/29/99

Lower Guadalupe River Flood Control Project
(Project No. 301511)
Santa Clara County, California

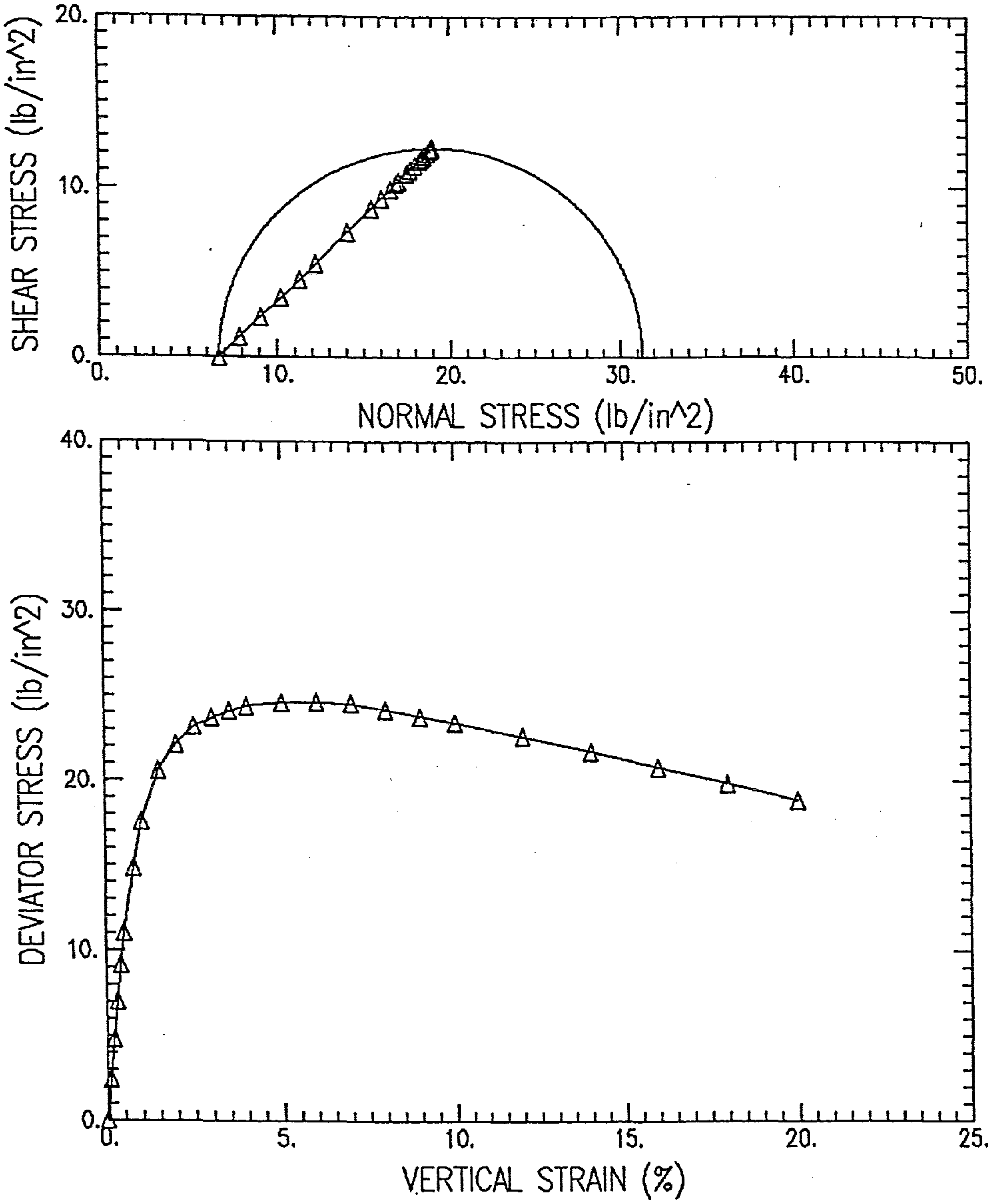
TRIAXIAL COMPRESSION TEST RESULTS

Re-Plotted from Archived Microfiche Report
Soil Investigation for the proposed Guadalupe River Project
Reaches 1 and 2, Santa Clara County, 1960
(Woodward-Clyde Project No. 4246)

Figure

TEMP001

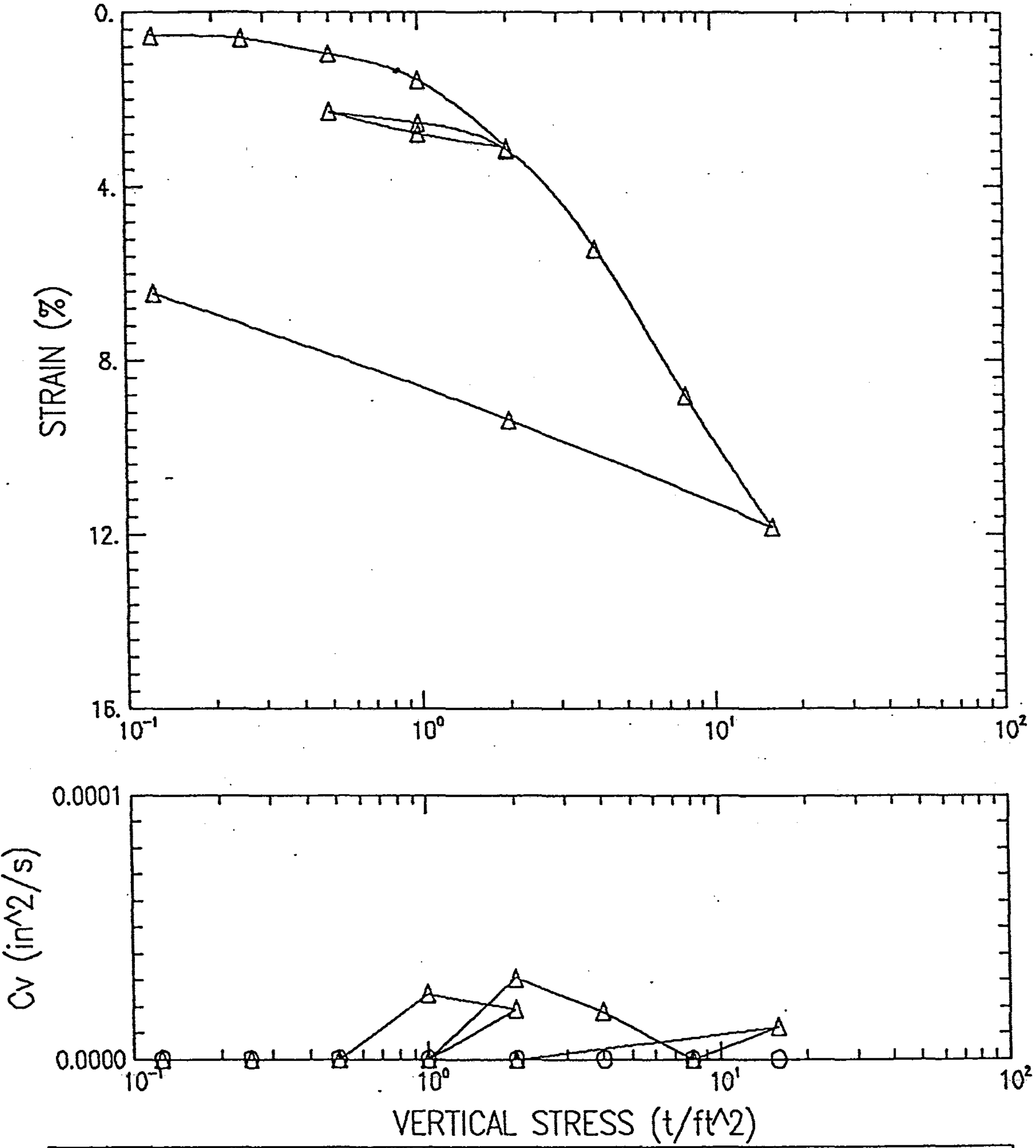
UNDRAINED TRIAXIAL TEST



Project Name : SKYPORT DRIVE BRIDGE

Boring No:	Sample No	Depth	Test No	Filename
B-9	5 @20-21.5	20-21.5 FT	B9-5	SKY9-5.UU

Skyport Drive Bridge   Woodward-Clyde Consultants
Project No. 963010NA   1997



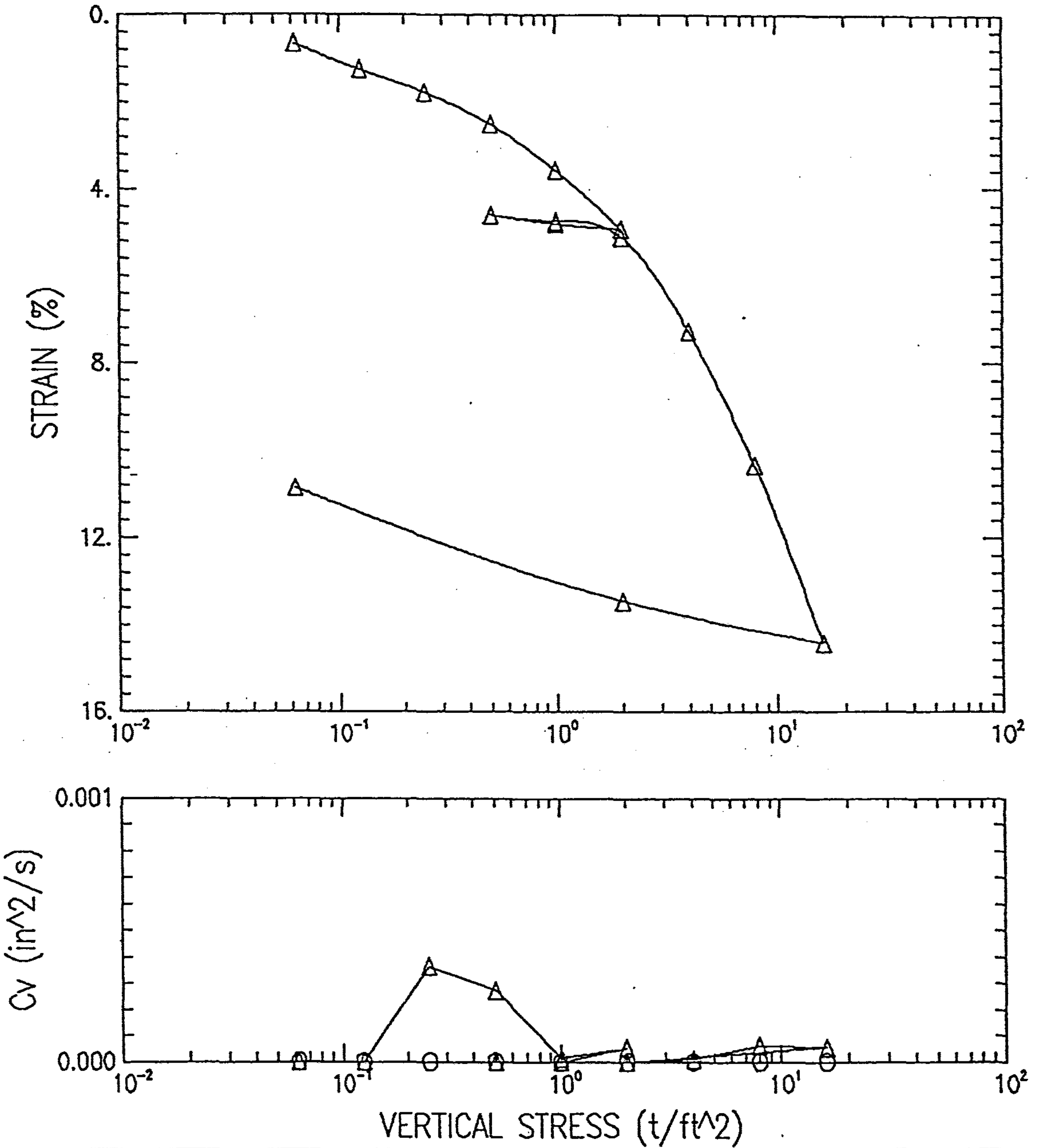
Woodward Clyde Consultants
Project Name : GUADALUPE RIVER CROSSING
Project No : 91C0639R Boring No : B-1 #2 Sample No : 2
Test Date : 01/22/92 Test No : B1 #2 Depth : 5.0-8.0 FT
Description : MOTTLED DARK GRAY TO LIGHT BROWN SILTY CLAY

Hetch-Hetchy Pipelines

Project No. 91C0639R
Woodward-Clyde Consultants

CONSOLIDATION TEST RESULTS
RELOCATION OF SAN FRANCISCO WATER DEPARTMENT
PIPELINE NOS. 3 AND 4 AT GUADALUPE RIVER

Figure 20

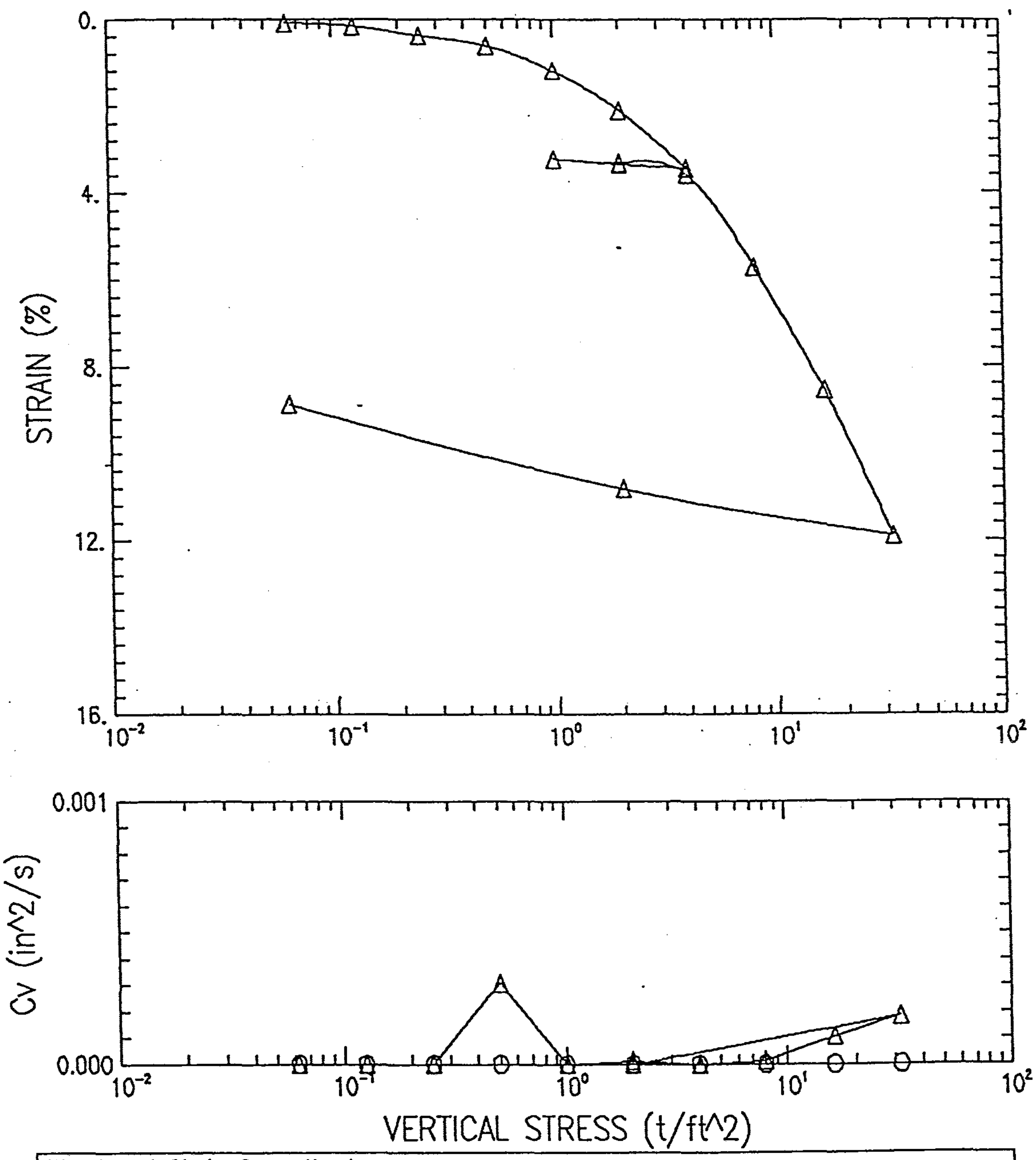


Woodward Clyde Consultants
Project Name : GUADALUPE RIVER CROSSING

Project No : 91C0639R	Boring No : B-1 #4	Sample No : 4
Test Date : 01/22/92	Test No : B1 #4	Depth : 15-17.5 FT

Description : BROWN SLIGHTLY GRAY SILTY CLAY WITH NODULES

Project No. 91C0639R **Woodward-Clyde Consultants**	CONSOLIDATION TEST RESULTS RELOCATION OF SAN FRANCISCO WATER DEPARTMENT PIPELINE NOS. 3 AND 4 AT GUADALUPE RIVER	Figure 21

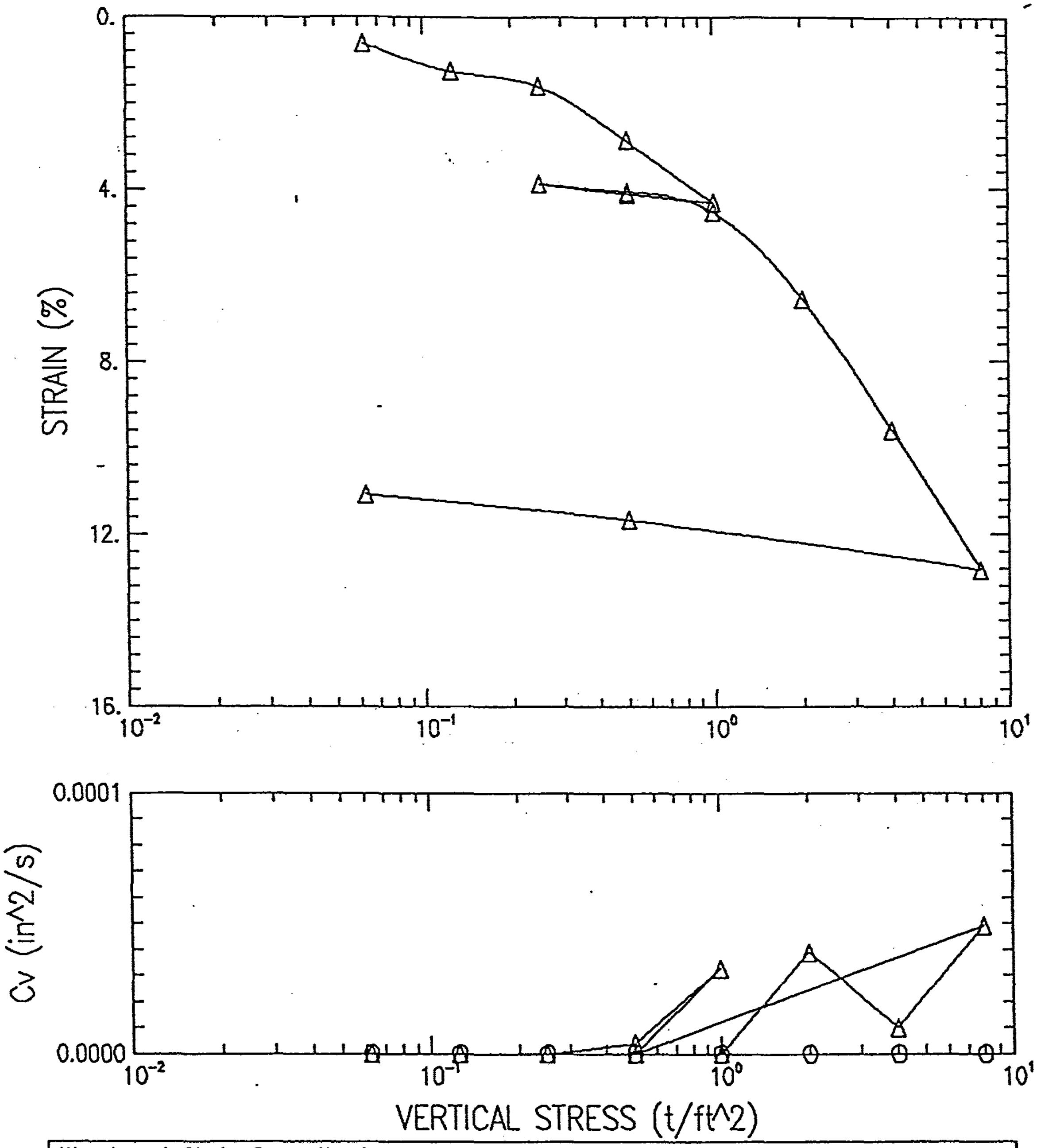


Woodward Clyde Consultants
Project Name : GUADALUPE RIVER CROSSING
Project No : 91C0639R Boring No : B-1 #8 Sample No : 8
Test Date : 01/22/92 Test No : B1 #8 Depth : 35-37.5 FT
Description : BROWN SLIGHTLY GRAY SILTY CLAY WITH NODULES

Project No. 91C0639R
Woodward-Clyde Consultants

CONSOLIDATION TEST RESULTS
RELOCATION OF SAN FRANCISCO WATER DEPARTMENT
PIPELINE NOS. 3 AND 4 AT GUADALUPE RIVER

Figure
22



Woodward Clyde Consultants

Project Name : GUADALUPE RIVER CROSSING

Project No : 91C0639R	Boring No : B-4 #10	Sample No : 10
Test Date : 01/23/92	Test No : B4 #10	Depth : 24-27 FEET

Description : GRAY SILTY CLAY

Project No. 91C0639R

Woodward-Clyde Consultants

CONSOLIDATION TEST RESULTS
RELOCATION OF SAN FRANCISCO WATER DEPARTMENT
PIPELINE NOS. 3 AND 4 AT GUADALUPE RIVER

Figure 23

TABLE 1

SUMMARY OF PERMEABILITY TESTS ON UNDISTURBED SAMPLES

SAMPLE NUMBER	SAMPLE ELEVATION, FT.	TYPE OF MATERIAL	COEFFICIENT OF PERMEABILITY (cm/sec)
4-3	8	Silty Sand	1.3×10^{-4}
8-3	1	Silty Sand	4.7×10^{-5}
17-3	-12	Silty Sand	2.2×10^{-6}

TABLE 2 - SUMMARY OF TRIAXIAL SHEAR TESTS ON RECOMPACTED MATERIAL, CONSOLIDATED UNDRAINED - REACH 2

				TOTAL STRESS		EFFECTIVE STRESS	
SAMPLE NUMBER	TYPE OF MATERIAL	INITIAL WATER CONTENT,%	INITIAL DRY DENSITY, PCF	COHESION PSF	ANGLE OF INTERNAL FRICTION,Ø°	COHESION PSF	Ø°
A-1	Clayey Sandy Silt, ML-CL	17.1	106.8				
A-2		17.0	106.8	400	21	0	34
A-3		16.9	106.8				
B-1	Silty Clay, CH	20.2	100.0				
B-2		19.5	100.5	200	20	0	34.5
B-3		20.2	100.0				

TABLE 3 - SUMMARY OF TRIAXIAL SHEAR TESTS ON UNDISTURBED SAMPLES, CONSOLIDATED UNDRAINED - REACH 2

				TOTAL STRESS		EFFECTIVE STRESS		
SAMPLE NUMBER	TYPE OF MATERIAL	INITIAL WATER CONTENT,%	INITIAL DRY DENSITY, PCF	COHESION PSF	ANGLE OF INTERNAL FRICTION,Ø°	COHESION PSF	Ø°	SAMPLE ELEVATION FT.
7-2-2	Sandy Clay	33	90					
7-2-3		33	89	200	26	0	35	-2
7-2-1		33	89					
11-3-3	Sandy Clay	26	100					
11-3-4		23	104	0	21	0	33	-5
11-3-2		33	90					
16-2-1B	Bay Mud	90	50					
1602-1A		90	50	0	14	0	26.5	-7

TABLE 4 - SUMMARY OF TRIAXIAL SHEAR TESTS ON UNDISTURBED SAMPLES,

CONSOLIDATED UNDRAINED - REACH 1

SAMPLE NUMBER	TYPE OF MATERIAL	INITIAL WATER CONTENT,%	INITIAL DRY DENSITY, PCF	TOTAL STRESS		EFFECTIVE STRESS		SAMPLE ELEVATION FT
				COHESION PSF	ANGLE OF INTERNAL FRICTION,Ø°	COHESION PSF	Ø°	
19-2-3	Bay Mud w/Peat	86	51	0	13	0	28	-10
19-2-2		94	47					
19-2-4		77	55					
22-1-3	Sandy Clay	65	61	100	19	0	35	-6
22-1-2		45	71					
31-3-4	Bay Mud w/Shells	34	87	0	18	0	32	-7
31-3-2		66	57					
31-3-3		37	83					
35-3-3	Bay Mud w/Peat	51	70	0	17	0	37	-8
35-3-2		56	67					
35-3-1		88	49					
38-3-4	Bay Mud	34	88	0	19	0	36	-9
38-3-2		43	79					
38-3-3		38	83					
B3-2-2	Bay Mud	26	97	0	20	0	34	-17
B3-2-4		30	95					
B3-2-3		25	101					

TABLE 5 - SUMMARY OF TRIAXIAL SHEAR TESTS ON UNDISTURBED SAMPLES,

UNCONSOLIDATED UNDRAINED - REACH 1

SAMPLE NUMBER	TYPE OF MATERIAL	CONFINING PRESSURE TSF	SHEAR STRENGTH PSF	INITIAL DRY DENSITY, PCF	INITIAL WATER CONTENT,%	SAMPLE ELEVATION, FT
18-1a	Bay Mud w/Peat	5.0	178	45	105	-7
18-1b	Bay Mud w/Peat	10.5	192	49	93	-7
26-1	Silty Sand	10.6	236	86	39	-8
29-4	Bay Mud w/Peat	12.4	192	50	90	-5
34-1	Silty Sand	3.6	4460	94	33	-11
R2-2	Bay Mud w/Peat	4.0	386	77	44	-2
R2-3a	Bay Mud w/Peat	2.0	408	91	31	-7
R2-3b	Bay Mud w/Peat	0	320	91	32	-7

DIRECT SHEAR TEST (Constant Normal Stress)

Sample Description Grey silty clay

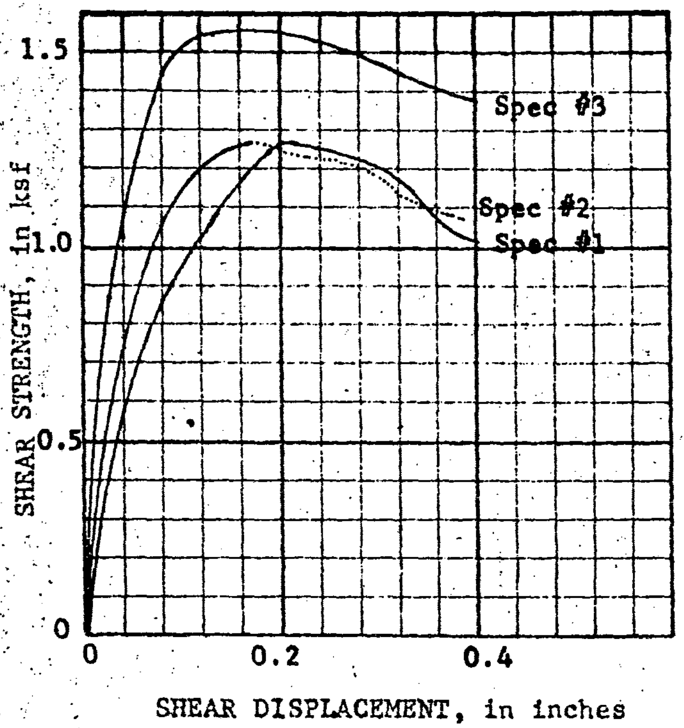
Hole No. 3 Depth, ft. 10

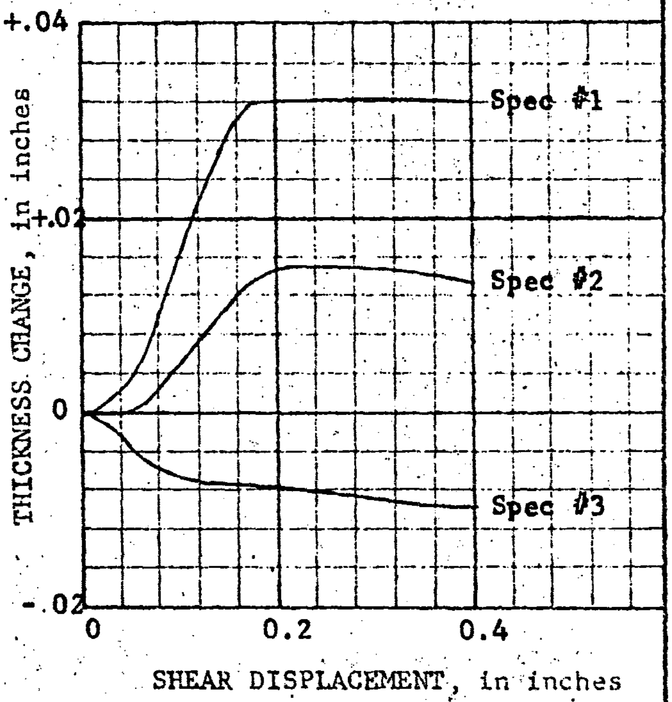
Rate of Strain, in./min. 0.032

Remarks *

Specimen Number	1	2	3	4	5
Consolidation Pressure ksf	0.5	1.0	2.0		
Initial Water Content%	33.4	33.2	-		
Final Water Content, %	32.7	32.7	32.6		
Dry Density, pcf	88.0	85.9	82.9		

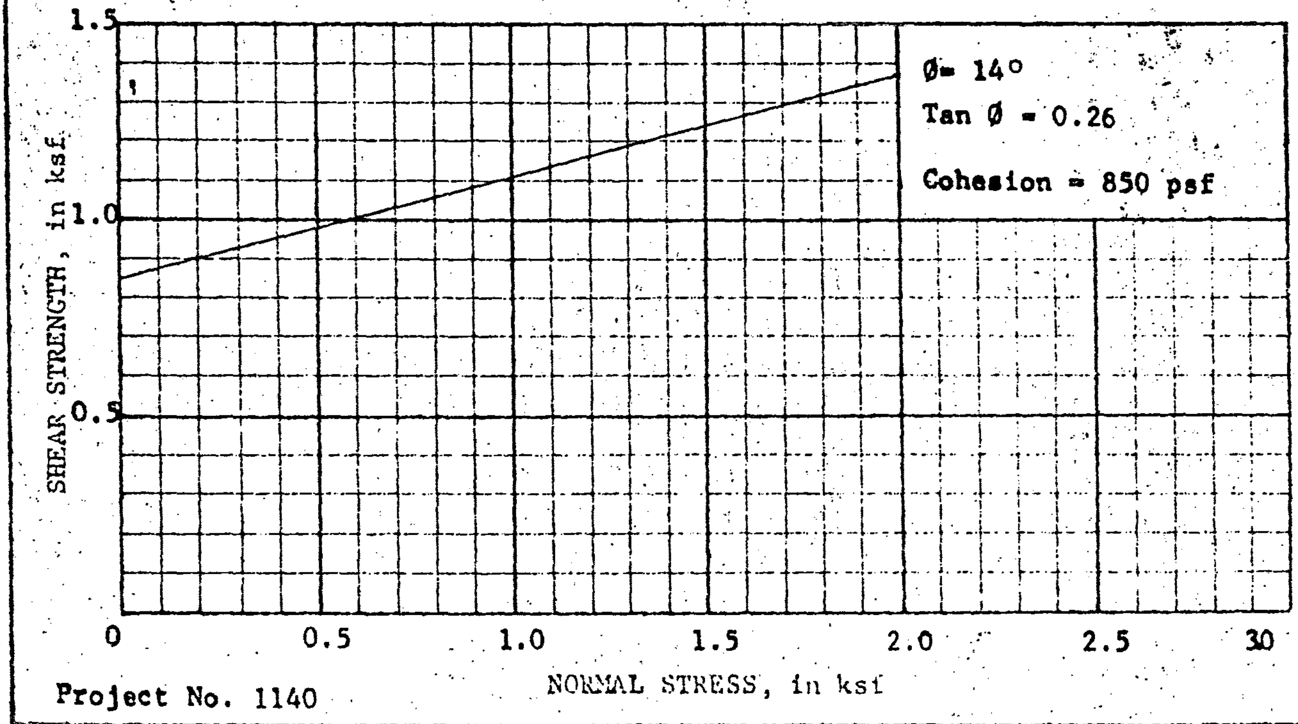
*Tests performed at natural water content. Failure criteria: ultimate shearing strength.





Soil Engineering Report for the Proposed Marina. Alviso

Soil Mechanics & Foundation Engineers



Ø = 14°
Tan Ø = 0.26
Cohesion = 850 psf

Project No. 1140

312-1

DIRECT SHEAR TEST (Constant Normal Stress)

Sample Description Grey silty clay with Peaty inclusions

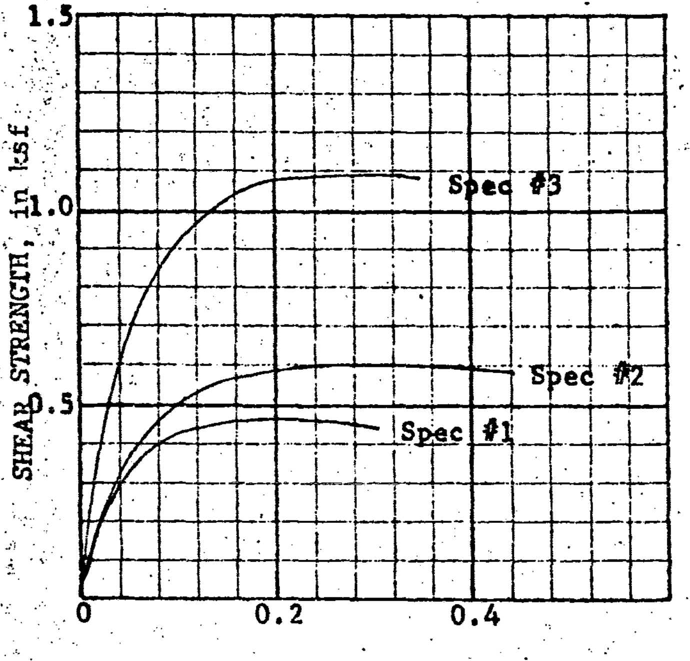
Hole No. 3 Depth, ft. 10

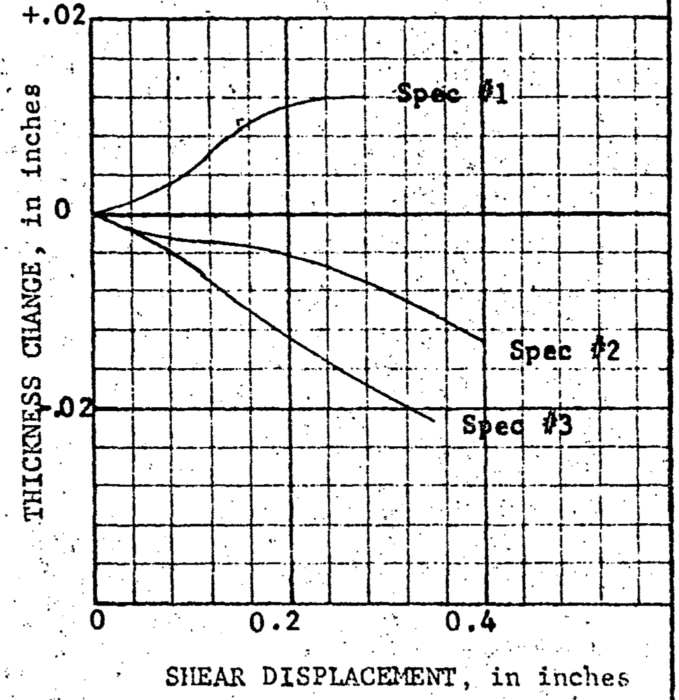
Rate of Strain, in./min 0.032

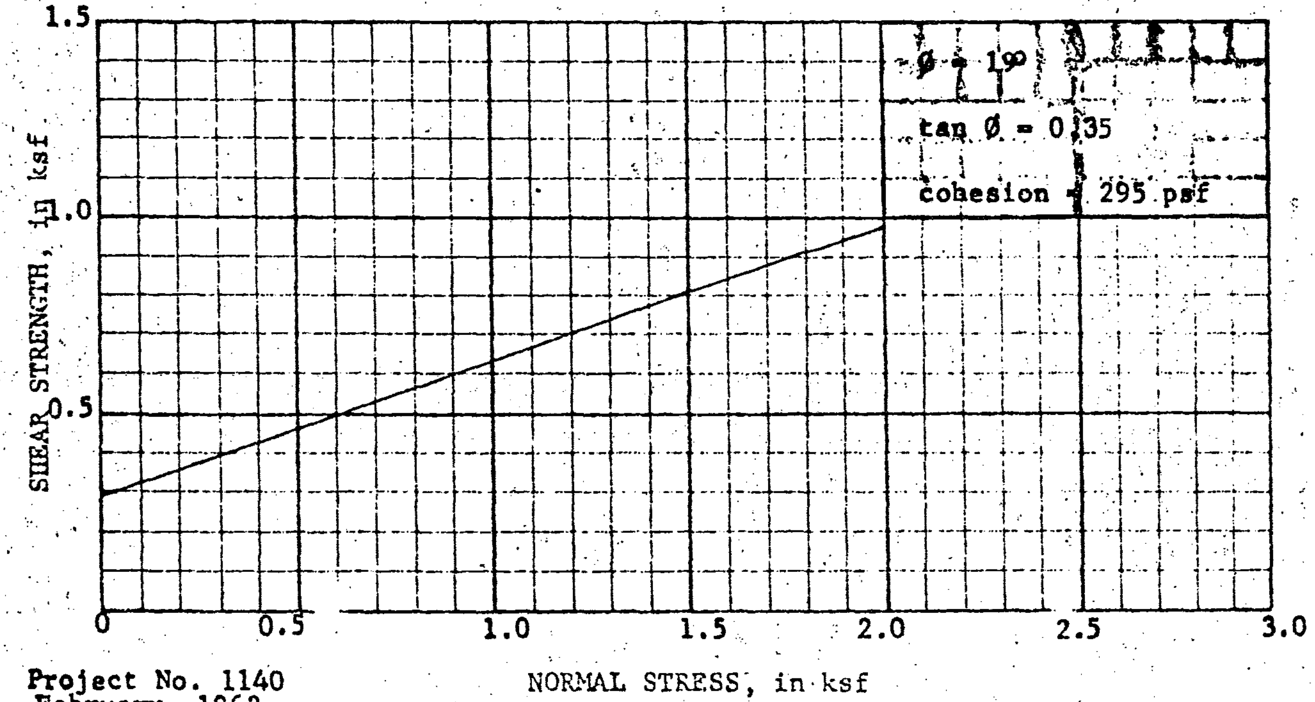
Remarks *

Specimen Number	1	2	3	4	5
Consolidation Pressure ksf	0.5	1	2		
Initial Water Content%	52.5	48.8	-		
Final Water Content, %	51.7	44.5	32.6		
Dry Density, pcf	65.8	71.9	50.2		

***Undisturbed specimens tested at natural water content. Failure Criteria: ultimate shear strength.**





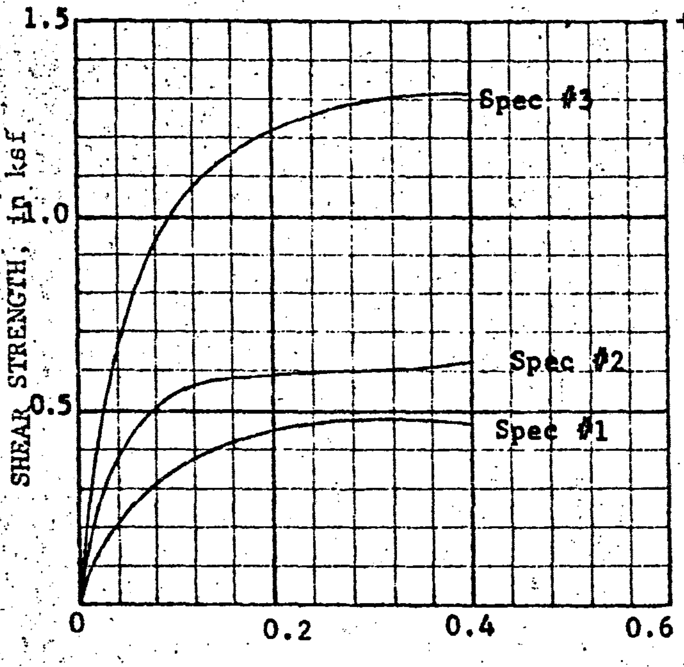


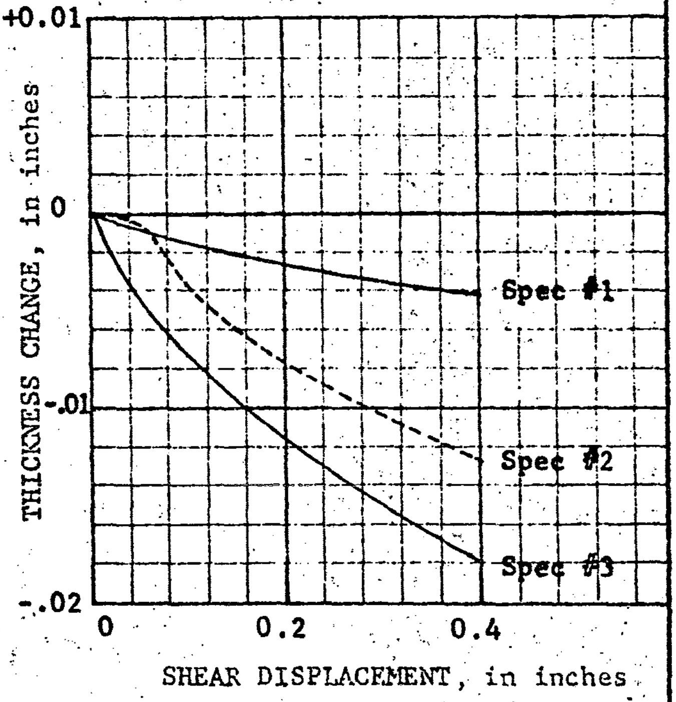
Project No. 1140
February, 1962

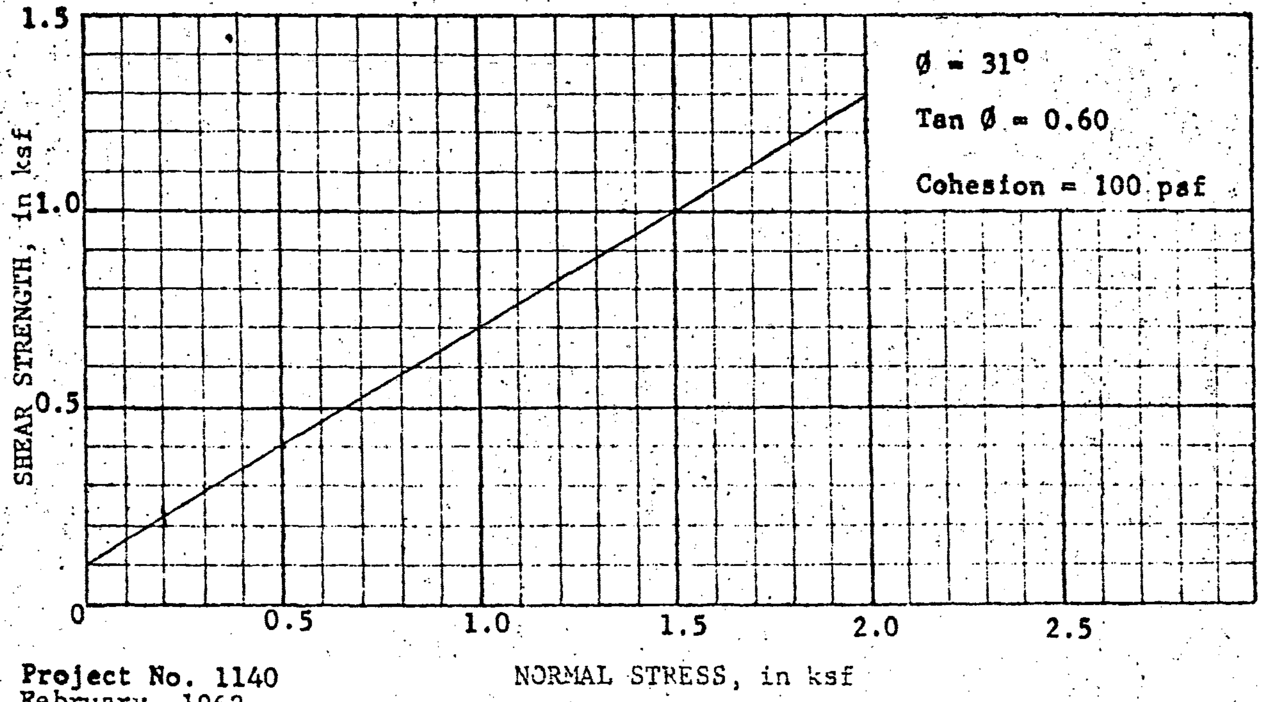
DIRECT SHEAR TEST (Constant Normal Stress)

Sample Description Gray silty clay with peaty inclusions.	Specimen Number	1	2	3	4	5
	Consolidation Pressure ksf	0.5	1.0	2.0		
Hole No. 5 Depth, ft. 5	Initial Water Content%	42.6	43.2	58.1		
Rate of Strain, in./min. 0.023	Final Water Content, %	41.1	41.0	50.3		
Remarks *	Dry Density, pcf	75.0	76.4	61.6		

***Tests performed at natural water content. Failure Criteria: Ultimate shear strength.**





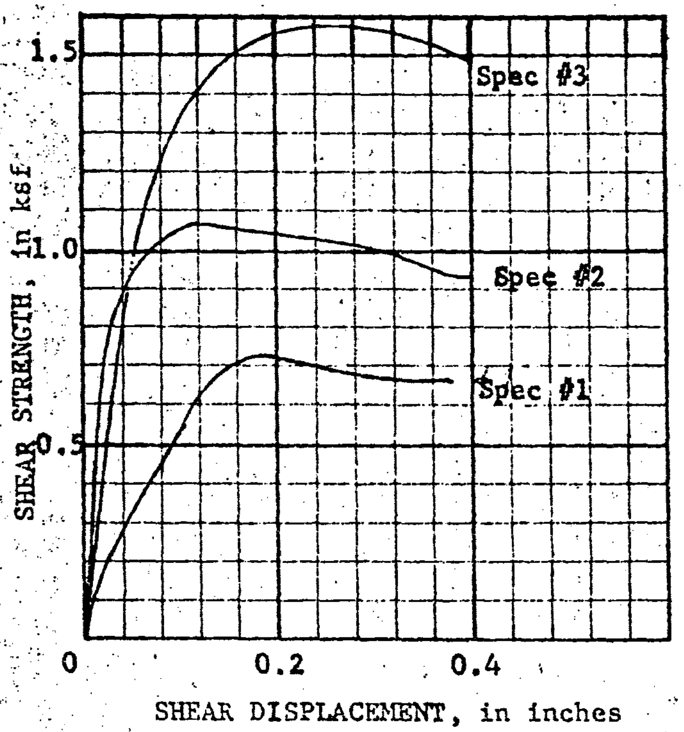


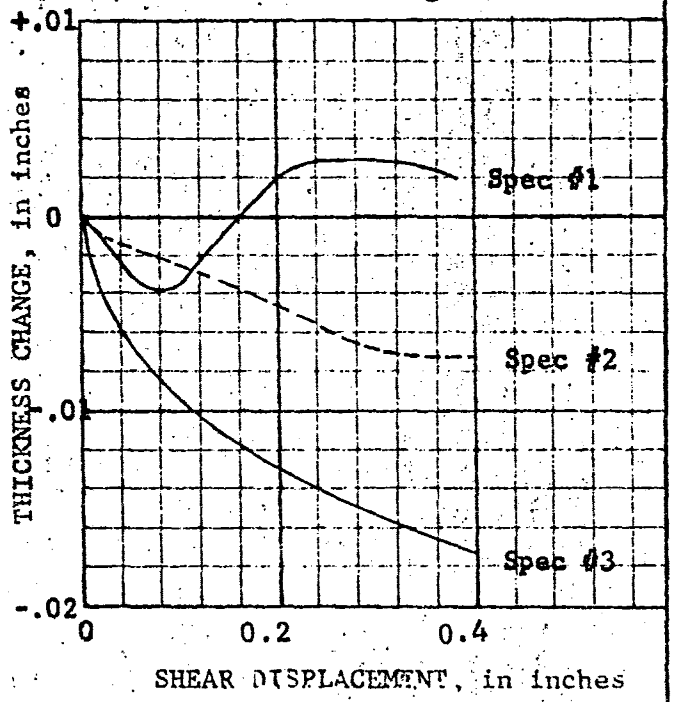
Project No. 1140
February, 1962

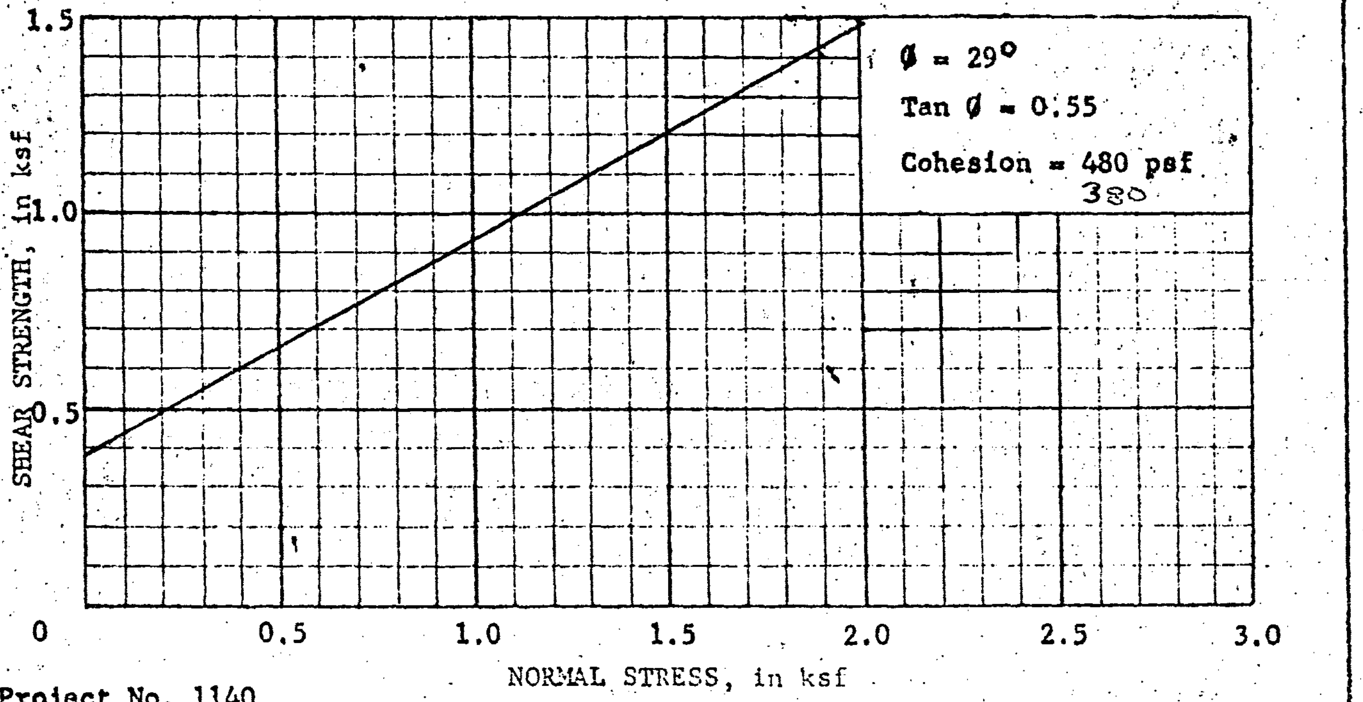
DIRECT SHEAR TEST (Constant Normal Stress)

Sample Description	Specimen Number	1	2	3	4	5
Light brown silty clay	Consolidation Pressure ksf	0.5	1.0	2.0		
Hole No. 5 Depth, ft. 8.5	Initial Water Content%	34.1	35.5	35.4		
Rate of Strain, in./min. 0.023	Final Water Content, %	35.9	35.5	35.5		
Remarks *	Dry Density, pcf	83.0	85.5	80.4		

*** Tests performed at natural water content. Failure criteria: Ultimate shearing strength.**







Project No. 1140

Figure 8

DIRECT SHEAR TEST (Constant Normal Stress)

Sample Description Light brown silty clay with inclusions of sand-size particles.

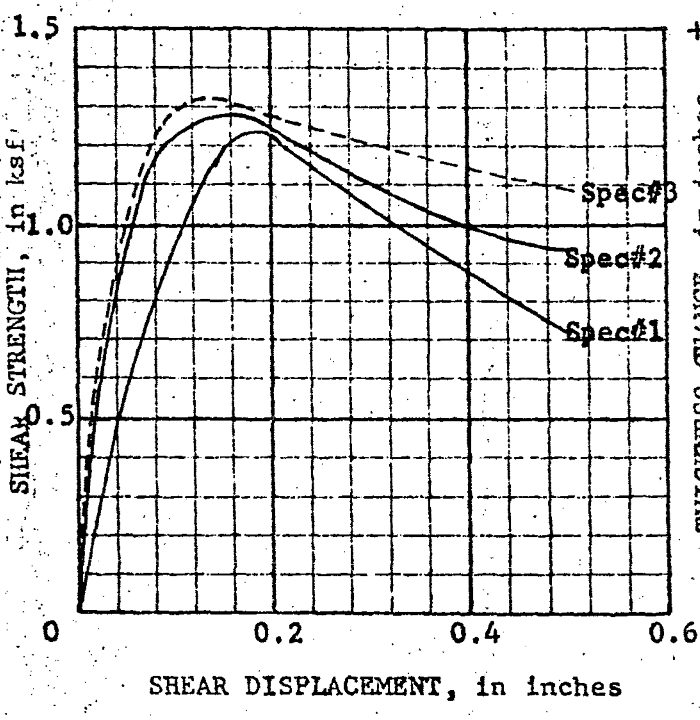
Hole No. 9 Depth, ft. 13

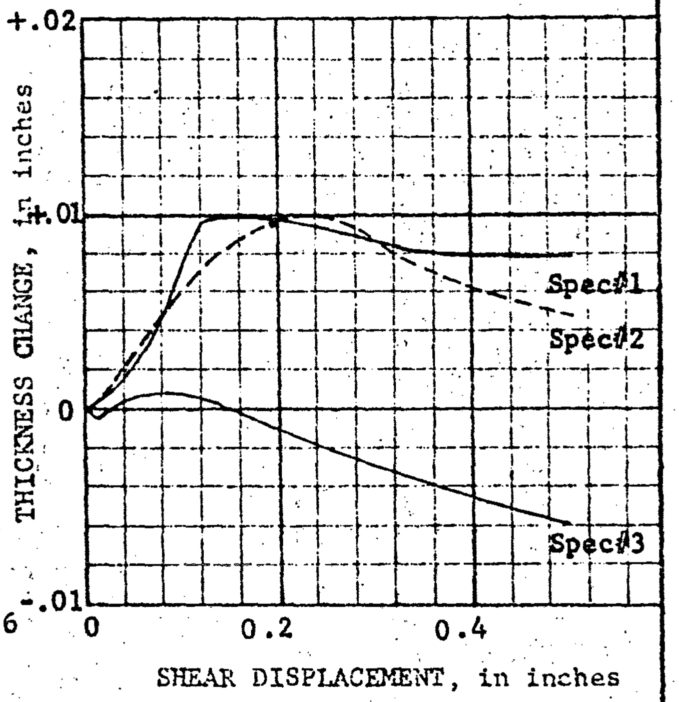
Rate of Strain, in./min. 0.027

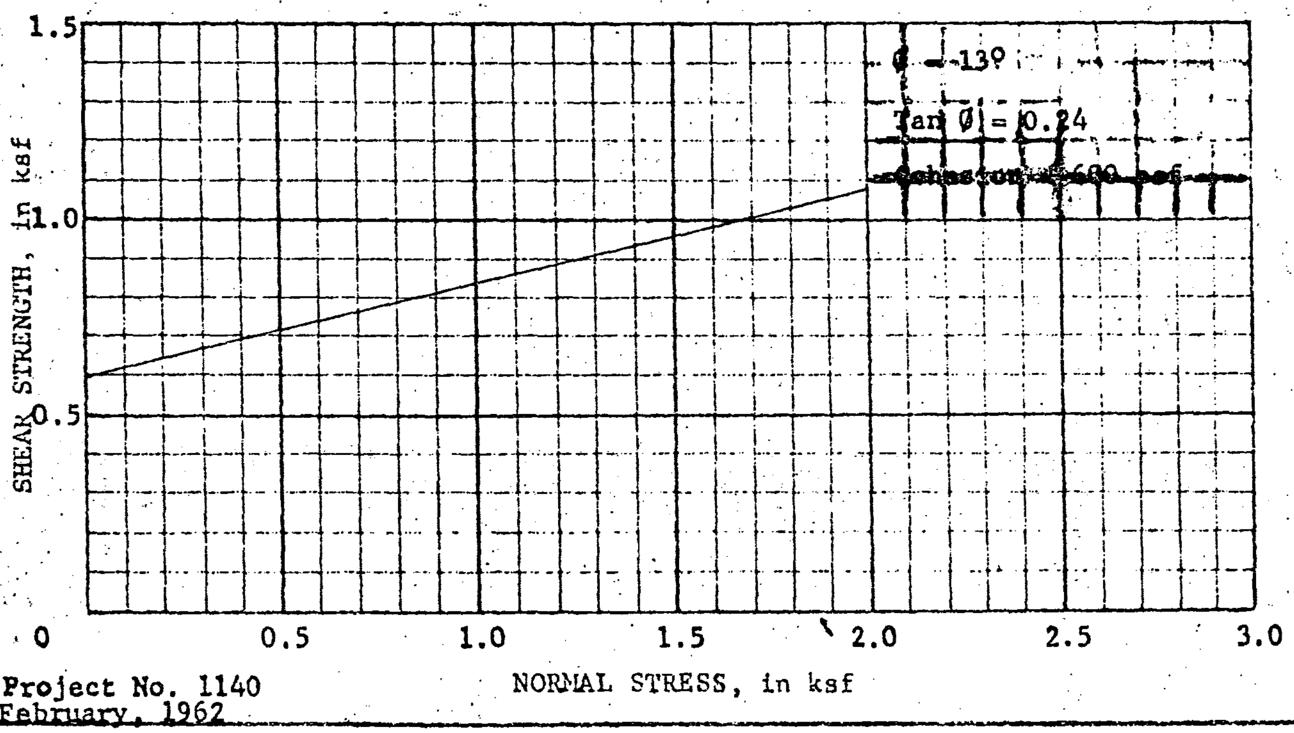
Remarks *

Specimen Number	1	2	3	4	5
Consolidation Pressure ksf	0.5	1.0	2.0		
Initial Water Content%	32.2	32.6	32.8		
Final Water Content, %	31.8	32.2	32.3		
Dry Density, pcf	90.7	91.0	91.6		

*** Tests performed at natural water content. Failure criteria: Ultimate shear strength.**







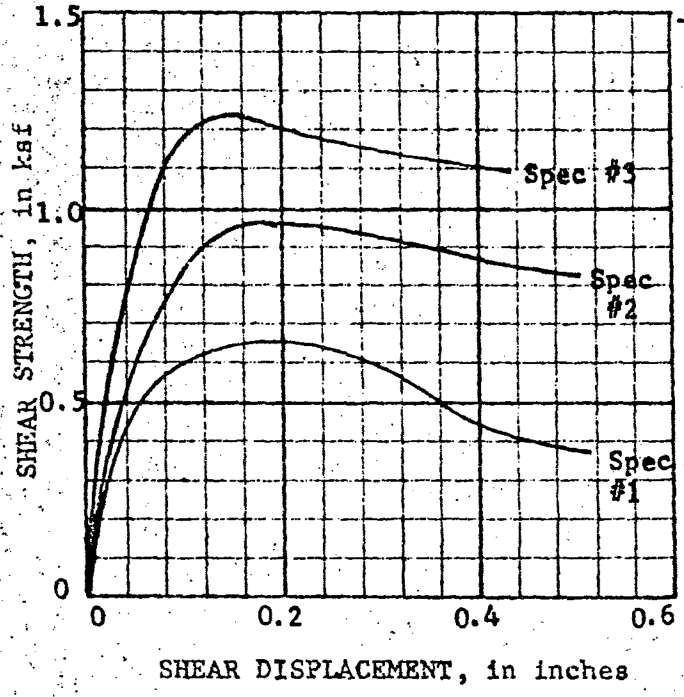
Project No. 1140
February, 1962

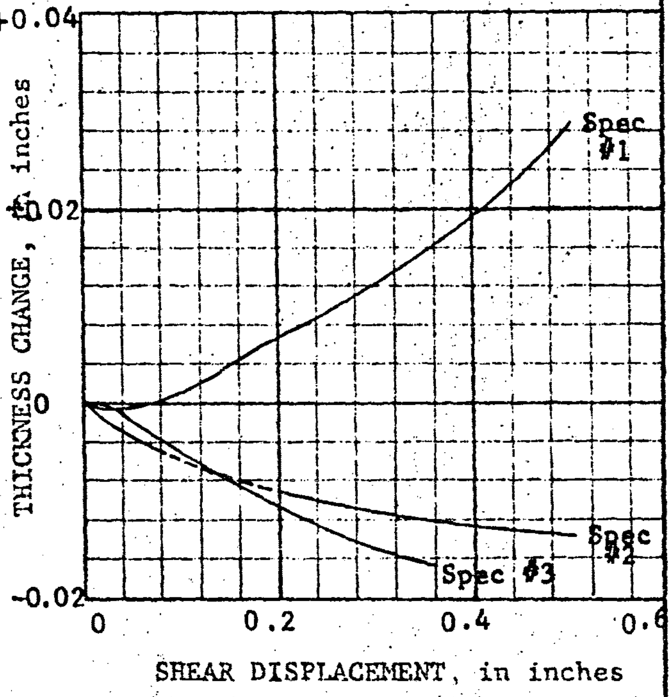
Figure 9

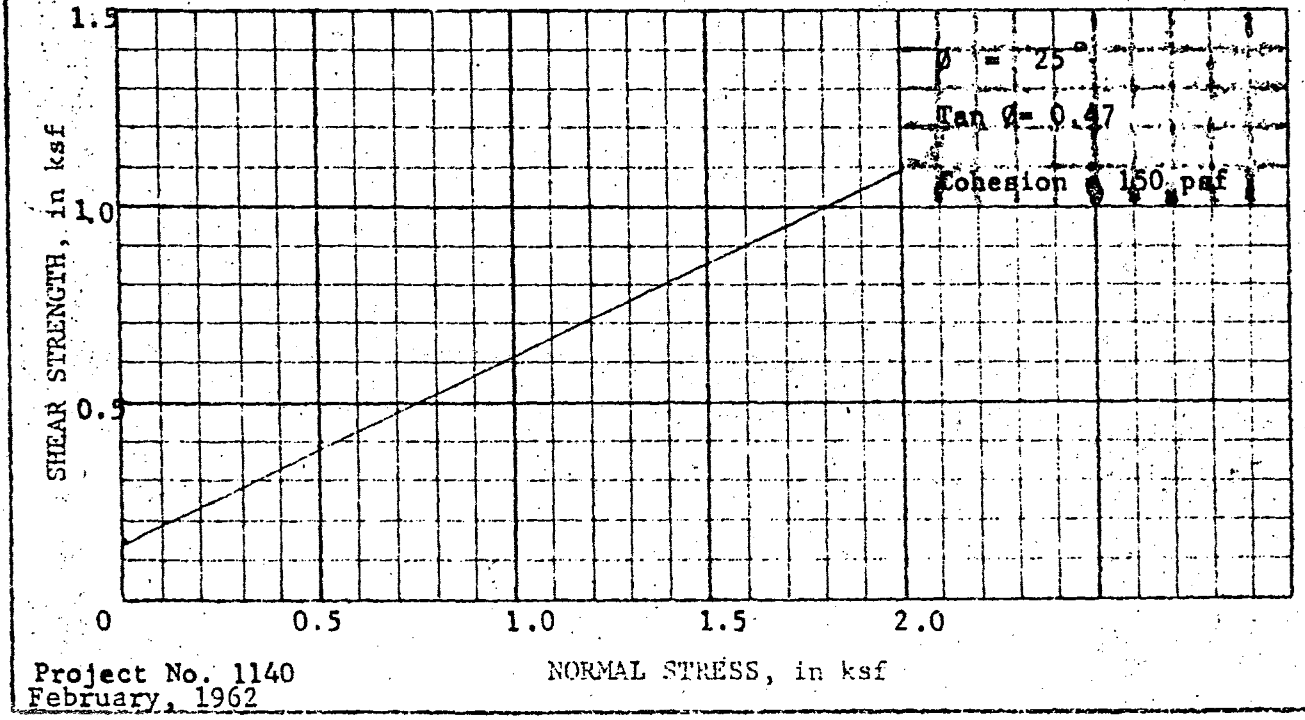
SLOW DIRECT SHEAR TEST (Constant Normal Stress)

Sample Description Light	Specimen Number	1	2	3	4	5
Brown Stiff Clay	Consolidation Pressure ksf	0.5	1.0	2.0		
Hole No. 9 Depth, ft. 13	Initial Water Content%	32.2	31.4	34.1		
Rate of Strain, in./min 0.0008	Final Water Content, %	33.0	31.5	34.6		
Remarks *	Dry Density, pcf	88.1	90.2	84.8		

*** Tests performed at natural water content on drained samples. Failure criteria: ultimate shear strength.**



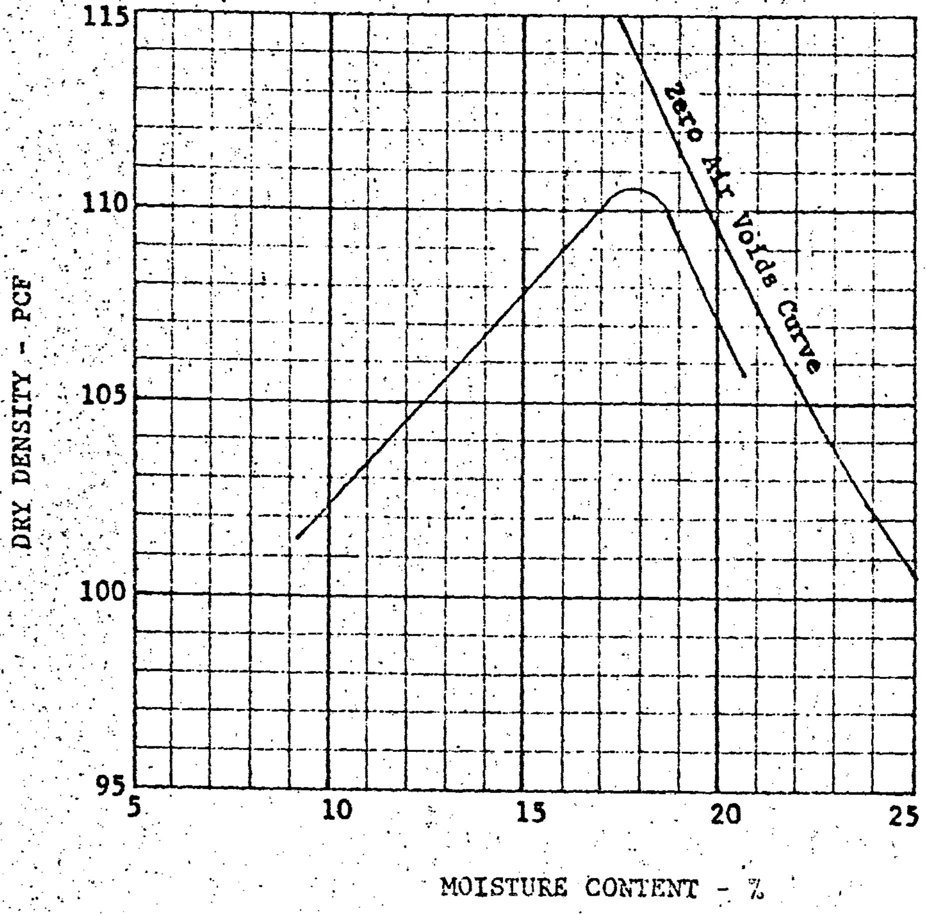




Project No. 1140
February, 1962

Figure 10

COMPACTION TEST



Sample No.
5

Sample Depth
9'

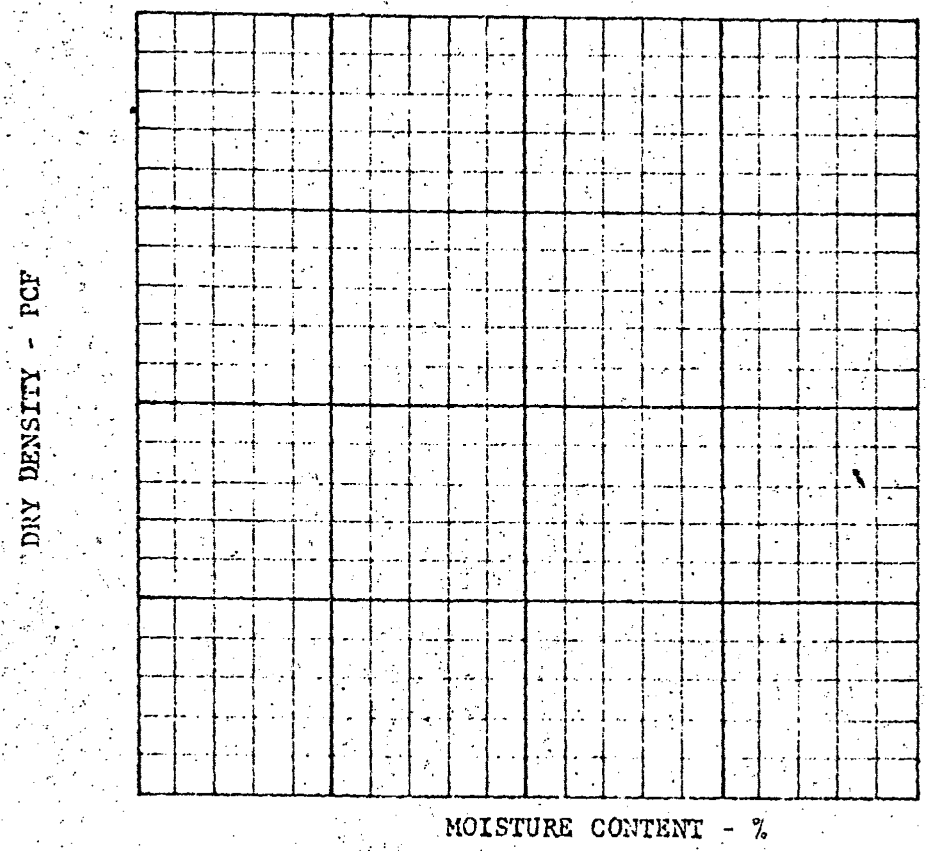
Sample Description
Light Brown
clay

Specific Gravity
2.70

Test Designation
Standard Proctor

Maximum Dry Density, pcf
110.6

Optimum Moisture Content, %
17.7



Sample No.

Sample Depth

Sample Description

Specific Gravity

Test Designation

Maximum Dry Density, pcf

Optimum Moisture Content, %

Project No. 1140

Date February, 1962

Figure 16

TABLE A
SUMMARY OF LABORATORY TEST DATA

Hole No.	Sample Depth ft.	Natural Water Content %	Natural Dry Density pcf	Liquid Limit %	Plastic Limit %	Unconfined Shear Strength psf
1	6	34.9		59	19	
1	9	36.6		63	21	
1	12	35.0				
1	15	24.1		59	18	
1	18	21.7		48	17	
3	10	34.8	82.7			960
3	12	17.5		58	18	
5	5	58.5	57.6			352
5	8½	32.8	88.8			1,410
5	15	20.9		37	17	
9	5	76.0	51.8			358
9	9	75.8	52.5			372
9	13	35.8	86.0			840

Project No. 1140

NOTES FROM MEETING ON DECEMBER 9, 1997

Location No.	Approximate Channel Station	Approximate Date Observed or Occurrence of Incidents	Description of Problem	Repair or mitigation
1	07+130 to 07+980 West Levee	1986, 1992 and 1996	Minor cracking along west levee from Gold Street Bridge to Hwy 237.	Regraded crest.
2	07+150 East Levee, east of Gold Street Bridge	1986 or 1988	During raising of Gold Street Bridge, asbestos was revealed in an excavation made in the vicinity of an old meander. The asbestos was later capped with about 6 feet of silt near outboard toe. No reported post-construction problems.	
3	08+270 East Levee	1986	Localized sloughing on outboard slope (East Levee) after heavy rain	
4	08+630 to 08+670 East Levee	Mid 1980s	Erosion of Oakmead Pump Station outfall.	Placed large rock riprap at inboard toe of outfall.
5	09+300 to 10+150 West Levee	On-going	Tire ruts left by County trucks and neighborhood recreational motorbikes	
6	09+300 to 11+800 East Levee	On-going	Water seeps through conduits in upper levee apparently created by animal burrows and dead tree (eucalyptus) root networks.	
7	09+550 West Levee	On-going	Return flow during high river level: improperly shut slide gate due to vandalism and sediment blocking outfall pipe.	Periodic cleaning of pipes
8	09+840 East Levee	Spring 1995	Blowout at Cisco System parking lot; asphalt pavement was lifted about 1 foot. Cause: Old drain pipe for “flood” irrigation was apparently capped improperly during construction of Cisco System campus. Cap was forced open during high river level in Spring 1995.	Exposed drain pipe at the levee toe on the inboard side and filled with concrete.

NOTES FROM MEETING ON DECEMBER 9, 1997

Location No.	Approximate Channel Station	Approximate Date Observed or Occurrence of Incidents	Description of Problem	Repair or mitigation
9	10+150 to 10+910 West Levee	1994 to 1995	Leaking wells due to artesian water conditions. Wells are either old farmer wells or monitoring wells for former CAMSL III site. Old well at about Station 10+500 ± at outboard toe to be destroyed.	Destroyed wells as they were uncovered.
10	10+900 West Levee	On-going	Return flow during high river level: improperly shut slide gate due to vandalism and sediment blocking outfall pipe.	
11	11+090 West Levee	Spring 1995	Slope failure on outboard side of levee adjacent to Lick Mill development: · wet spots were observed; · material became saturated and was described as "viscous;" · 50 to 70-foot section of levee slipped (approx. 3/4 width of levee). Debris including bricks and plastic bottles were exposed in the levee fill. Possible cause: artesian water condition at an old well suspected to be part of the monitoring well network for a former chemical plant, CAMSL III (1983 plan)	Replaced damaged levee with clean, compacted fill. Well Section should have kept records of well and its destruction. Contact: Mike Duffey
12	11+160 to 11+200 West Levee	Fall 1997	Seepage observed on inboard toe of West Levee. Cause: artesian water condition from an old well under levee fill.	Sealed well. Removed wet fill, including brick and concrete chunks, pipes and other debris, and replaced with well compacted import clay fill.

Location No.	Approximate Channel Station	Approximate Date Observed or Occurrence of Incidents	Description of Problem	Repair or mitigation
13	11+800 East Levee	August 1996	Deep crack on outboard side of levee and shallow slip plane near old outfall pipe (20 inch dia.)	
14	12+000 West Levee	1982 to 1983	50 to 100-foot section on the inboard toe of old levee eroded	Backfilled with rock
15	13+150 East Levee	1995	Blowout at Acer parking lot beyond outboard toe of levee; lifted asphalt concrete pavement about 2 feet. Cause: Improperly plugged old irrigation drain pipe was forced open during high river flow level in Spring 1995.	Exposed drain pipe at the levee toe on the inboard side and filled with concrete.
16	13+650 to 13+750 West Levee	Late 1980s and 1996	Surface cracking observed. Cause: Shrinkage cracks in late 1980s apparently the result of drought conditions.	
17	14+350 East Levee	1980	Erosion along levee bank downstream of concrete lined slope	Scraped off loose material and recompacted slope surface.
18	16+100 to 16+400 West Levee	On-going and more significantly in 1995	Collapse of maintenance road bank primarily due to scouring and erosion.	Addressed in new Skyport Drive Bridge slope protection with proposed gabion wall.

Other observations:

1. Between 1993 and 1994, the District excavated about 14,000 cubic yards of sediments in low flow area in the reach from Montague Expressway to about 200 feet upstream of Trimble Road.
2. Previous settlement data was based on NGVD datum; current and new data are based on North American Vertical Datum.

NOTES FROM MEETING ON DECEMBER 9, 1997

3. During 1995 raising of levees between Highway 101 and south of Gold Street, reportedly truck traffic caused pumping/rutting of clay materials on crest at some locations.

Notes:

1. The information presented in the above table was based on a meeting with the Santa Clara Valley Water District (SCVWD) staff on Dec 9, 1997. Those who were present at the meeting included:

SCVWD	Peter Sheydayi
	Darin Gossett
	Dennis Ely
	Rick Linquist
	Gene Balzer
	Kenn Reiller
Woodward-Clyde	Michael Larson
	Stephen Huang

SITE LOCATION

PROJECT NO. 973017NB

FIELD RECONNAISSANCE

APPROX. STATION: 10+250 **WEST / ~~EAST*~~ LEVEE**

~~INBOARD~~/ OUTBOARD/ CREST*

*** Delete as appropriate**

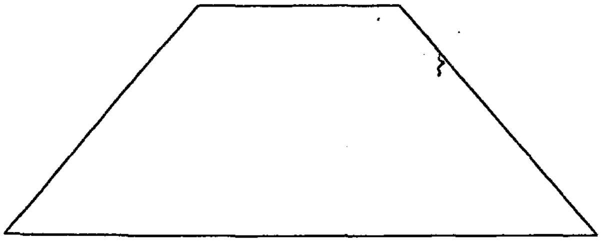
DESCRIPTION

SEEPAGE	
SLIP/ CRACK	30' (10 m) crack
SETTLE-MENT	
EROSION	
VEGETA-TION	

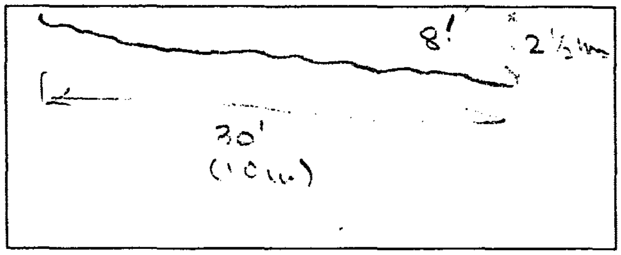
SKETCH

Remarks:

PLAN



CROSS-SECTION



SIDE

PHOTO REFERENCE
Roll No. ______ **Frame No.** ______

SEEPAGE	SLIP/CRACK	SETTLEMENT	EROSION	VEGETATION
0 = None	0 = None	0 = <10mm	0 = None	0 = Concrete/Paved
1 = Wet Spot	1 = Shallow slip <2m	1 = Hummocky/Undulated	1 = Rill	1 = Bare
2 = Spring	2 = Deep seated slip >2m	2 = Sagged	2 = Gully	2 = Grass, scrubb
3 = Artesian/Boil	3 = Tension crack	3 = Sink hole/caving	3 = Sheet/channel	3 = Tree
4 = Other, specify	4 = Other, specify	4 = Other, specify	4 = Other, specify	4 = Other, specify

SITE LOCATION

PROJECT NO. 973017NB

FIELD RECONNAISSANCE

APPROX. STATION: 10+500 **WEST / ~~EAST~~* LEVEE**

~~INBOARD~~ / OUTBOARD/ ~~CREST*~~

*** Delete as appropriate**

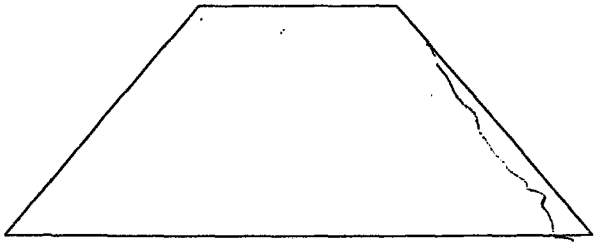
DESCRIPTION

SEEPAGE	WELL DECOMMISSIONED ; ~~SURFACE~~ SURFACE AND TOE DISTURBED
SLIP/ CRACK	
SETTLE-MENT	
EROSION	
VEGETA-TION	

SKETCH

Remarks:

PLAN



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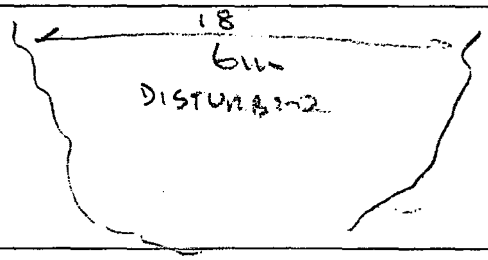


SIDE

PHOTO REFERENCE
Roll No. ________________ **Frame No.** ________

SEEPAGE	SLIP/CRACK	SETTLEMENT	EROSION	VEGETATION
0 = None	0 = None	0 = <10mm	0 = None	0 = Concrete/Paved
1 = Wet Spot	1 = Shallow slip <2m	1 = Hummocky/Undulated	1 = Rill	1 = Bare
2 = Spring	2 = Deep seated slip >2m	2 = Sagged	2 = Gully	2 = Grass, scrubb
3 = Artesian/Boil	3 = Tension crack	3 = Sink hole/caving	3 = Sheet/channel	3 = Tree
4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify

SITE LOCATION **PROJECT NO. 973017NB**

FIELD RECONNAISSANCE

APPROX. STATION: 10+890 **WEST / ~~EAST~~* LEVEE**

INBOARD ~~/ OUTBOARD/~~ CREST*

*** Delete as appropriate**

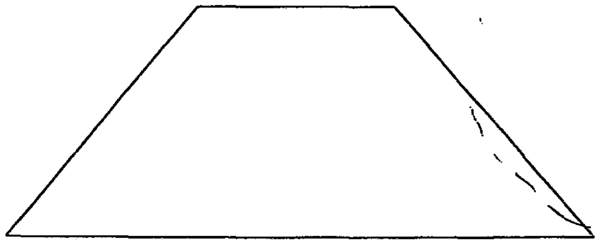
DESCRIPTION

SEEPAGE	
SLIP/ CRACK	
SETTLEMENT	
EROSION	SCOUR AT TOE
VEGETATION	

SKETCH

Remarks:

PLAN



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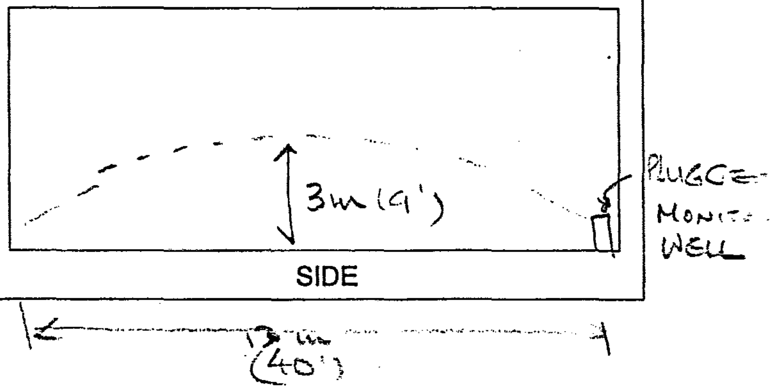


SIDE

PHOTO REFERENCE
Roll No. ______________ **Frame No.** ________

SEEPAGE	SLIP/CRACK	SETTLEMENT	EROSION	VEGETATION
0 = None	0 = None	0 = <10mm	0 = None	0 = Concrete/Paved
1 = Wet Spot	1 = Shallow slip <2m	1 = Hummocky/Undulated	1 = Rill	1 = Bare
2 = Spring	2 = Deep seated slip >2m	2 = Sagged	2 = Gully	2 = Grass, scrubb
3 = Artesian/Boil	3 = Tension crack	3 = Sink hole/caving	3 = Sheet/channel	3 = Tree
4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify

SITE LOCATION

PROJECT NO. 973017NB

FIELD RECONNAISSANCE

APPROX. STATION: 10+920 **WEST / ~~EAST~~* LEVEE**

~~INBOARD~~ / OUTBOARD/ CREST*

*** Delete as appropriate**

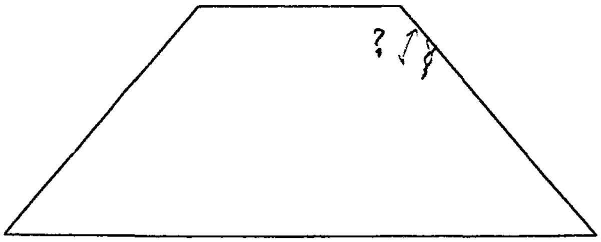
DESCRIPTION

SEEPAGE	
SLIP/ CRACK	CRACK at ½ to 1m from edge of crest
SETTLE-MENT	
EROSION	
VEGETA-TION	

SKETCH

Remarks:

PLAN



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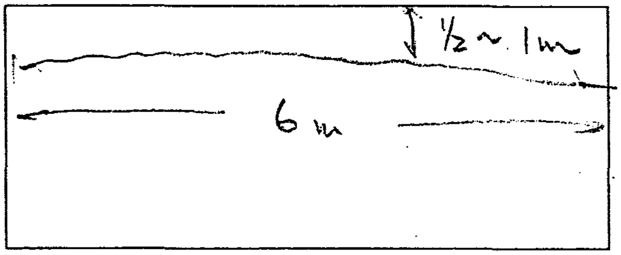


SIDE

PHOTO REFERENCE
Roll No. ________ **Frame No.** ________

SEEPAGE	SLIP/CRACK	SETTLEMENT	EROSION	VEGETATION
0 = None	0 = None	0 = <10mm	0 = None	0 = Concrete/Paved
1 = Wet Spot	1 = Shallow slip <2m	1 = Hummocky/Undulated	1 = Rill	1 = Bare
2 = Spring	2 = Deep seated slip >2m	2 = Sagged	2 = Gully	2 = Grass, scrubb
3 = Artesian/Boil	3 = Tension crack	3 = Sink hole/caving	3 = Sheet/channel	3 = Tree
4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify

SITE LOCATION

PROJECT NO. 973017NB

FIELD RECONNAISSANCE

APPROX. STATION: 10 +980 **WEST / ~~EAST~~* LEVEE**

INBOARD / ~~OUTBOARD~~/ CREST*

*** Delete as appropriate**

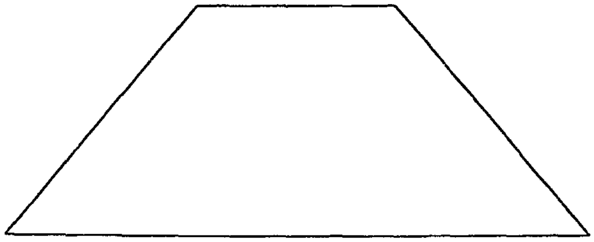
DESCRIPTION

SEEPAGE	
SLIP/ CRACK	
SETTLE-MENT	
EROSION	SCOUR, EROSION
VEGETA-TION	

SKETCH

Remarks:

PLAN



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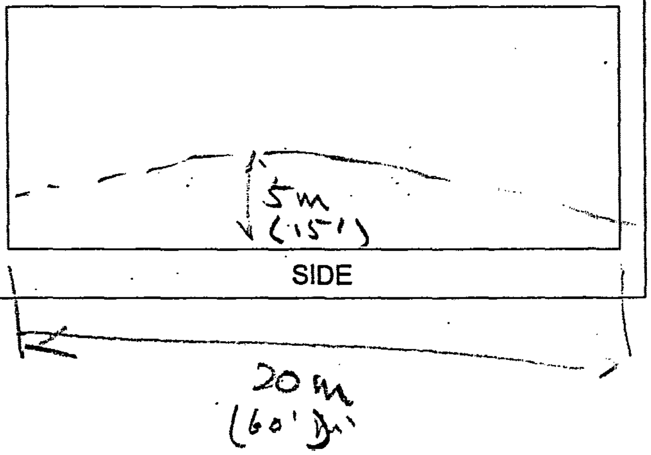


SIDE

PHOTO REFERENCE
Roll No. ______________ **Frame No.** ________

SEEPAGE	SLIP/CRACK	SETTLEMENT	EROSION	VEGETATION
0 = None	0 = None	0 = <10mm	0 = None	0 = Concrete/Paved
1 = Wet Spot	1 = Shallow slip <2m	1 = Hummocky/Undulated	1 = Rill	1 = Bare
2 = Spring	2 = Deep seated slip >2m	2 = Sagged	2 = Gully	2 = Grass, scrubb
3 = Artesian/Boil	3 = Tension crack	3 = Sink hole/caving	3 = Sheet/channel	3 = Tree
4 = Other, specify	4 = Other, specify	4 = Other, specify	4 = Other, specify	4 = Other, specify

PROJECT NO. 973017NB

FIELD RECONNAISSANCE

SITE LOCATION

APPROX. STATION: 11+750 **WEST / ~~EAST~~* LEVEE**

~~INBOARD~~/ OUTBOARD/~~CREST~~*

*** Delete as appropriate**

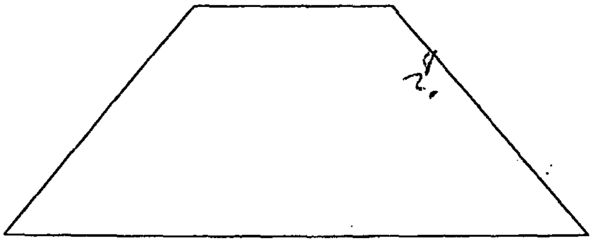
DESCRIPTION

SEEPAGE	
SLIP/ CRACK	Longitudinal crack near top
SETTLE-MENT	
EROSION	
VEGETA-TION	

SKETCH

PLAN

Remarks:



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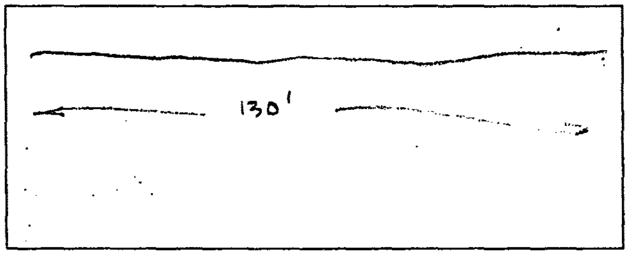


SIDE

PHOTO REFERENCE
Roll No. ______________ **Frame No.** ________

SEEPAGE	SLIP/CRACK	SETTLEMENT	EROSION	VEGETATION
0 = None	0 = None	0 = <10mm	0 = None	0 = Concrete/Paved
1 = Wet Spot	1 = Shallow slip <2m	1 = Hummocky/Undulated	1 = Rill	1 = Bare
2 = Spring	2 = Deep seated slip >2m	2 = Sagged	2 = Gully	2 = Grass, scrubb
3 = Artesian/Boil	3 = Tension crack	3 = Sink hole/caving	3 = Sheet/channel	3 = Tree
4 = Other, specify	4 = Other, specify	4 = Other, specify	4 = Other, specify	4 = Other, specify

SITE LOCATION

PROJECT NO. 973017NB

FIELD RECONNAISSANCE

APPROX. STATION: 12+280 **WEST / ~~EAST*~~ LEVEE**

~~INBOARD~~ / OUTBOARD/ ~~CREST*~~

*** Delete as appropriate**

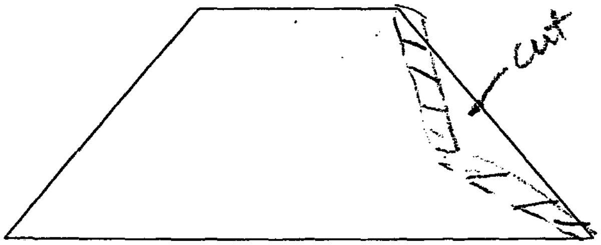
DESCRIPTION

SEEPAGE	
SLIP/ CRACK	WOODEN LADDER CUT INTO LEVEE
SETTLE-MENT	
EROSION	
VEGETA-TION	

SKETCH

Remarks:

PLAN



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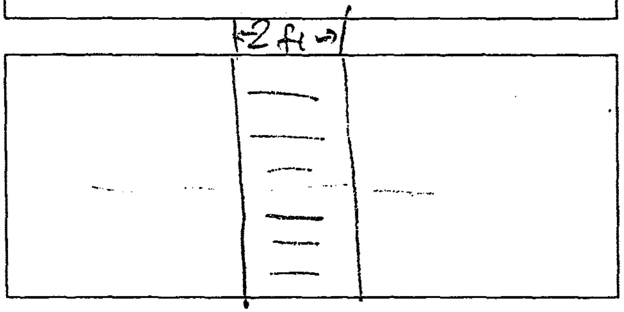


SIDE

PHOTO REFERENCE
Roll No. ________________ **Frame No.** ________

SEEPAGE	SLIP/CRACK	SETTLEMENT	EROSION	VEGETATION
0 = None	0 = None	0 = <10mm	0 = None	0 = Concrete/Paved
1 = Wet Spot	1 = Shallow slip <2m	1 = Hummocky/Undulated	1 = Rill	1 = Bare
2 = Spring	2 = Deep seated slip >2m	2 = Sagged	2 = Gully	2 = Grass, scrubb
3 = Artesian/Boil	3 = Tension crack	3 = Sink hole/caving	3 = Sheet/channel	3 = Tree
4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify

SITE LOCATION

PROJECT NO. 973017NB

FIELD RECONNAISSANCE

APPROX. STATION: 12+860 **WEST / ~~EAST~~* LEVEE**

~~INBOARD~~ / OUTBOARD/ ~~CREST~~*

* Delete as appropriate

DESCRIPTION

SEEPAGE	
SLIP/ CRACK	Buldge at toe
SETTLE-MENT	
EROSION	
VEGETA-TION	

SKETCH

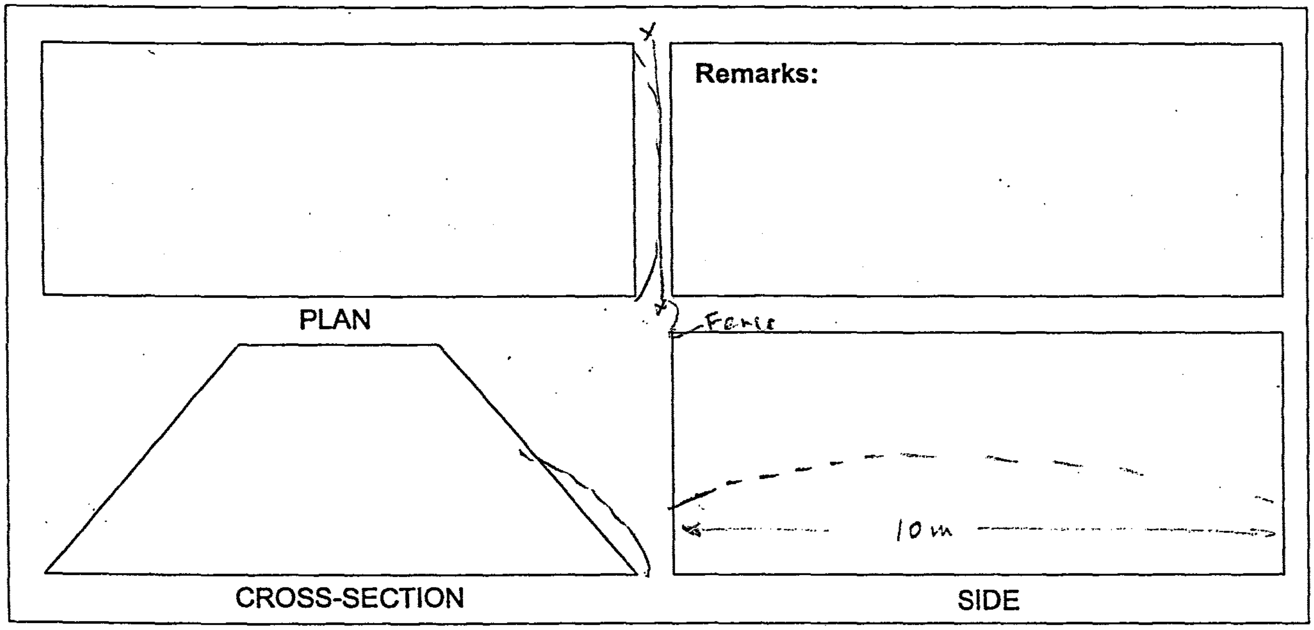


PHOTO REFERENCE
Roll No. ______________ **Frame No.** ________

SEEPAGE	SLIP/CRACK	SETTLEMENT	EROSION	VEGETATION
0 = None	0 = None	0 = <10mm	0 = None	0 = Concrete/Paved
1 = Wet Spot	1 = Shallow slip <2m	1 = Hummocky/Undulated	1 = Rill	1 = Bare
2 = Spring	2 = Deep seated slip >2m	2 = Sagged	2 = Gully	2 = Grass, scrubb
3 = Artesian/Boil	3 = Tension crack	3 = Sink hole/caving	3 = Sheet/channel	3 = Tree
4 = Other, specify	4 = Other, specify	4 = Other, specify	4 = Other, specify	4 = Other, specify

SITE LOCATION

PROJECT NO. 973017NB

FIELD RECONNAISSANCE

APPROX. STATION: 14+990 **WEST / ~~EAST~~* LEVEE**

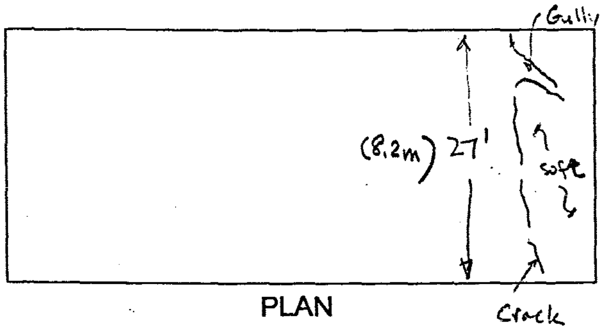
INBOARD / ~~OUTBOARD~~/ CREST*

*** Delete as appropriate**

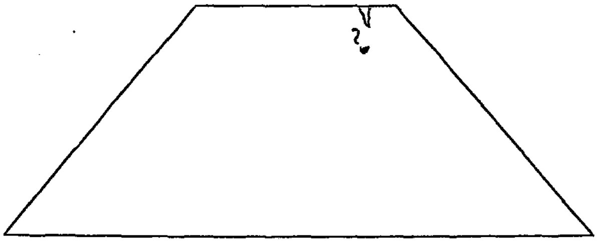
DESCRIPTION

SEEPAGE	
SLIP/ CRACK	Tension Crack developed to gully, soft subgrade.
SETTLE-MENT	
EROSION	
VEGETA-TION	

SKETCH



PLAN



CROSS-SECTION

Remarks:

SIDE

PHOTO REFERENCE
Roll No. ________________ **Frame No.** ________

SEEPAGE	SLIP/CRACK	SETTLEMENT	EROSION	VEGETATION
0 = None	0 = None	0 = <10mm	0 = None	0 = Concrete/Paved
1 = Wet Spot	1 = Shallow slip <2m	1 = Hummocky/Undulated	1 = Rill	1 = Bare
2 = Spring	2 = Deep seated slip >2m	2 = Sagged	2 = Gully	2 = Grass, scrubb
3 = Artesian/Boil	3 = Tension crack	3 = Sink hole/caving	3 = Sheet/channel	3 = Tree
4 = Other, specify	4 = Other, specify	4 = Other, specify	4 = Other, specify	4 = Other, specify

SITE LOCATION

PROJECT NO. 973017NB

FIELD RECONNAISSANCE

APPROX. STATION: 15+700 **WEST /~~EAST~~* LEVEE**

INBOARD ~~/OUTBOARD/CREST~~*

*** Delete as appropriate**

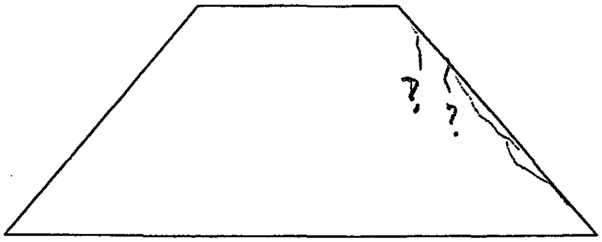
DESCRIPTION

SEEPAGE	
SLIP/ CRACK	Shallow slip ; steep side slope > 1 to 1 (~3/4 to 1)
SETTLE-MENT	
EROSION	
VEGETA-TION	

SKETCH

Remarks:

PLAN



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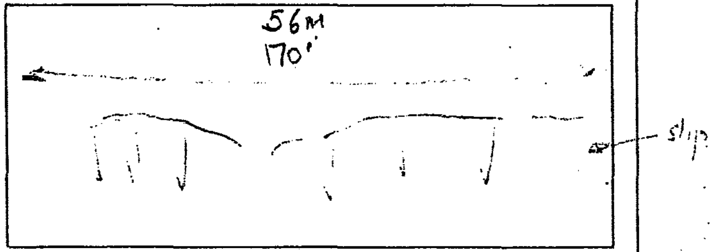


SIDE

PHOTO REFERENCE
Roll No. __________ **Frame No.** ________

SEEPAGE	SLIP/CRACK	SETTLEMENT	EROSION	VEGETATION
0 = None	0 = None	0 = <10mm	0 = None	0 = Concrete/Paved
1 = Wet Spot	1 = Shallow slip <2m	1 = Hummocky/Undulated	1 = Rill	1 = Bare
2 = Spring	2 = Deep seated slip >2m	2 = Sagged	2 = Gully	2 = Grass, scrubb
3 = Artesian/Boil	3 = Tension crack	3 = Sink hole/caving	3 = Sheet/channel	3 = Tree
4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify

DATE: 12/19/97 TIME: ______ **PROJECT NO. 973017NB**

WEATHER: Sunny

FIELD RECONNAISSANCE

RECORDED BY SH ~~EAST~~ / WEST LEVEE FIELD CREW: MLL, NM, DG (SCWD)

SEEPAGE						
SLIP/ CRACK			Uneven edge of slope;			
SETTLE-MENT			surplus material from 1995 raising			
EROSION				Torn erosion seeding mesh		
VEGETA-TION	④ Armored Aggregate (AA) →					
REF. LOC.	UPRR TRACK		GOLD STREET BRIDGE			
	↑	0+050	0+100	0+150	0+200	0+250 / 0+300

Plan View from Station 7+00 to 7+300 Reference Location: UPRR

SEEPAGE						
SLIP/ CRACK	Slope change, steep side slope (surplus material for 1995 raising)					
SETTLE-MENT						
EROSION	② due to water pumped from adjacent salvage yard.					
VEGETA-TION	② →					
REF. LOC.						
		0+050	0+100	0+150	0+200	0+250 / 0+300

In-board View from Station 7+00 to 7+300 Reference Location: ______

SEEPAGE						
SLIP/ CRACK						
SETTLE-MENT						
EROSION						
VEGETA-TION	① →					
REF. LOC.						
		0+050	0+100	0+150	0+200	0+250 / 0+300

Out-board View from Station 7+00 to 7+300 Reference Location: ______

SEEPAGE	SLIP/CRACK	SETTLEMENT	EROSION	VEGETATION
0 = None	0 = None	0 = None	0 = None	0 = Concrete/Paved
1 = Wet Spot	1 = Shallow slip <2m	1 = Hummocky/Undulated	1 = Rill	1 = Bare to short grass
2 = Spring	2 = Deep seated slip >2m	2 = Sagged	2 = Gully	2 = Scrubb, brush
3 = Artesian/Boil	3 = Tension crack	3 = Sink hole/caving	3 = Sheet/channel	3 = Tree
4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify

Bu = Animal Burrow

DATE: 12/19/97 TIME: ______

PROJECT NO. 973017NB

WEATHER: SUNNY

FIELD RECONNAISSANCE

RECORDED BY SH

~~EAST~~ / WEST LEVEE

FIELD CREW: ML, NM, DG (SCVWD)

SEEPAGE						
SLIP/ CRACK						
SETTLE-MENT						
EROSION						
VEGETA-TION	④ AA →	→	→	→	→	→
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

Plan View from Station 7+300 **to** 7+600 **Reference Location:** ______

SEEPAGE						
SLIP/ CRACK						
SETTLE-MENT						Sagged at edge; possible heavy equipment load during 1995 construction
EROSION						
VEGETA-TION	② →	→	→	→	① to ② →	→
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

In-board View from Station 7+300 **to** 7+600 **Reference Location:** ______

SEEPAGE						
SLIP/ CRACK						
SETTLE-MENT						
EROSION						
VEGETA-TION	① →	→	→	→	① to ② →	→
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

Out-board View from Station 7+300 **to** 7+600 **Reference Location:** ______

SEEPAGE	SLIP/CRACK	SETTLEMENT	EROSION	VEGETATION
0 = None	0 = None	0 = None	0 = None	0 = Concrete/Paved
1 = Wet Spot	1 = Shallow slip <2m	1 = Hummocky/Undulated	1 = Rill	1 = Bare to short grass
2 = Spring	2 = Deep seated slip >2m	2 = Sagged	2 = Gully	2 = Scrubb, brush
3 = Artesian/Boil	3 = Tension crack	3 = Sink hole/caving	3 = Sheet/channel	3 = Tree
4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify

DATE: 12/19/97 TIME: ____________ **PROJECT NO. 973017NB**

WEATHER: Sunny

FIELD RECONNAISSANCE

RECORDED BY SH ~~EAST~~ / WEST LEVEE Field Crew : ML, NM, DG(SCVWD)

SEEPAGE						
SLIP/ CRACK						
SETTLE-MENT						② ⟷
EROSION						
VEGETA-TION	④ AA					
REF. LOC.						

0+050 0+100 0+150 0+200 0+250 0+300

Hwy

Plan View from Station 7+600 **to** 7+950 **Reference Location:** ____________

SEEPAGE						
SLIP/ CRACK						
SETTLE-MENT						
EROSION						
VEGETA-TION	① to ②					
REF. LOC.						

④ Bu

①

0+050 0+100 0+150 0+200 0+250 0+300

In-board View from Station 7+600 **to** 7+950 **Reference Location:** ____________

SEEPAGE	① @ toe					
SLIP/ CRACK						
SETTLE-MENT						
EROSION					Bare spot; old stockpile for brush	
VEGETA-TION	① to ②					
REF. LOC.			Pipe crossing to be constructed			

0+050 0+100 0+150 0+200 0+250 0+300

800 900

Out-board View from Station 7+600 **to** 7+950 **Reference Location:** ____________

SEEPAGE	SLIP/CRACK	SETTLEMENT	EROSION	VEGETATION
0 = None	0 = None	0 = None	0 = None	0 = Concrete/Paved
1 = Wet Spot	1 = Shallow slip <2m	1 = Hummocky/Undulated	1 = Rill	1 = Bare to short grass
2 = Spring	2 = Deep seated slip >2m	2 = Sagged	2 = Gully	2 = Scrubb, brush
3 = Artesian/Boil	3 = Tension crack	3 = Sink hole/caving	3 = Sheet/channel	3 = Tree
4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify

DATE: 1/17/98 TIME: 13:15

PROJECT NO. 973017NB

WEATHER: SUNNY, WARM

FIELD RECONNAISSANCE

RECORDED BY SH ~~EAST~~ / WEST LEVEE

SEEPAGE						
SLIP/ CRACK						
SETTLE-MENT	← ② →	① - - →				
EROSION				RUTTING @ THE ACCESS TO PUMP HOUSE		
VEGETA-TION						
REF. LOC.						

0+050 0+100 0+150 0+200 0+250 0+300

Plan View from Station 7+950 **to** 8+100 **Reference Location:** ______

SEEPAGE		Bu near crest x x		Bw x x	3-24in Flap gate outfall ⊗⊗⊗	
SLIP/ CRACK						
SETTLE-MENT						
EROSION				①, SHALLOW ② NEAR OUTFALL, NEAR CREST ▼ ▼		
VEGETA-TION						
REF. LOC.						

0+050 0+100 0+150 0+200 0+250 0+300
7+950 8+000 8+050 8+100

In-board View from Station 7+950 **to** 8+100 **Reference Location:** ______

SEEPAGE			① AT TOE, RAIN RUNOFF	- - →		
SLIP/ CRACK						
SETTLE-MENT						
EROSION		② ▼				
VEGETA-TION			SILTED UNDER BRIDGE			
REF. LOC.			→ HWY 237 ←			

0+050 0+100 0+150 0+200 0+250 0+300

Out-board View from Station 7+950 **to** 8+100 **Reference Location:** ______

SEEPAGE	SLIP/CRACK	SETTLEMENT	EROSION	VEGETATION
0 = None	0 = None	0 = None	0 = None	0 = Concrete/Paved
1 = Wet Spot	1 = Shallow slip <2m	1 = Hummocky/Undulated	1 = Rill	1 = Bare to short grass
2 = Spring	2 = Deep seated slip >2m	2 = Sagged	2 = Gully	2 = Scrubb, brush
3 = Artesian/Boil	3 = Tension crack	3 = Sink hole/caving	3 = Sheet/channel	3 = Tree
4 = Other, specify	4 = Other, specify	4 = Other, specify	4 = Other, specify	4 = Other, specify

DATE: 12/19/97 TIME: 13:50

PROJECT NO. 973017NB

WEATHER: Sunny

FIELD RECONNAISSANCE

RECORDED BY SH ~~EAST~~ / WEST LEVEE

Field Crew: ML, NM, DG (SCVWD

SEEPAGE						
SLIP/ CRACK						
SETTLE-MENT						
EROSION						
VEGETA-TION	④ AA					
REF. LOC.	HWY237					
	0+050	0+100	0+150	0+200	0+250	0+300

Plan View from Station 8+100 **to** 8+400 **Reference Location:** ________

SEEPAGE	Bu		Bu	Bu		
SLIP/ CRACK			③ Uncompacted edge →	→	→	→
SETTLE-MENT						
EROSION						
VEGETA-TION	① to ② →	→	→	→	→	→
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

In-board View from Station 8+100 **to** 8+400 **Reference Location:** ________

SEEPAGE		Ditch @ toe ① at toe →	→	→	→	→
SLIP/ CRACK						
SETTLE-MENT						
EROSION						
VEGETA-TION	① to ② →	→	→	→	→	→
REF. LOC.		↑PG&E Pipe Crossing				
	0+050	0+100	0+150	0+200	0+250	0+300

Out-board View from Station 8+100 **to** 8+400 **Reference Location:** ________

SEEPAGE	SLIP/CRACK	SETTLEMENT	EROSION	VEGETATION
0 = None	0 = None	0 = None	0 = None	0 = Concrete/Paved
1 = Wet Spot	1 = Shallow slip <2m	1 = Hummocky/Undulated	1 = Rill	1 = Bare to short grass
2 = Spring	2 = Deep seated slip >2m	2 = Sagged	2 = Gully	2 = Scrubb, brush
3 = Artesian/Boil	3 = Tension crack	3 = Sink hole/caving	3 = Sheet/channel	3 = Tree
4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify

DATE: 12/19/97 TIME: ____________

PROJECT NO. 973017NB

WEATHER: SUNNY

FIELD RECONNAISSANCE

RECORDED BY SH

~~EAST~~ / WEST LEVEE

FIELD CREW: ML, NM, DG (SCVWD)

SEEPAGE						
SLIP/ CRACK						
SETTLE-MENT	① near inboard edge	→	→	→	→	→
EROSION						
VEGETA-TION	④ AA					
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

Plan View from Station 8+400 **to** 8+700 **Reference Location:** ____________

SEEPAGE			Bu	Bu		
SLIP/ CRACK	③ discontinued	crack	along upper uncompacted levee	slope face	→	→
SETTLE-MENT	② some	sagging	→	→	→	→
EROSION	① →	→	→		② Some gully	erosion
VEGETA-TION	① to ②	→	→	→	→	→
REF. LOC.					across from	Oakmead Pump Station
	0+050	0+100	0+150	0+200	0+250	0+300

In-board View from Station 8+400 **to** 8+700 **Reference Location:** ____________

SEEPAGE	① @ toe Ditch	(continued) →	→	→	→	→
SLIP/ CRACK						
SETTLE-MENT						
EROSION						
VEGETA-TION	② →	→	① →	→	→	→
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

Out-board View from Station 8+400 **to** 8+700 **Reference Location:** ____________

SEEPAGE	SLIP/CRACK	SETTLEMENT	EROSION	VEGETATION
0 = None	0 = None	0 = None	0 = None	0 = Concrete/Paved
1 = Wet Spot	1 = Shallow slip <2m	1 = Hummocky/Undulated	1 = Rill	1 = Bare to short grass
2 = Spring	2 = Deep seated slip >2m	2 = Sagged	2 = Gully	2 = Scrubb, brush
3 = Artesian/Boil	3 = Tension crack	3 = Sink hole/caving	3 = Sheet/channel	3 = Tree
4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify

DATE: 12/19/97 TIME: ______________

PROJECT NO. 973017NB

WEATHER: Sunny

FIELD RECONNAISSANCE

RECORDED BY SH

~~EAST~~ / WEST LEVEE Field Crew: ML, NM, DG (SCVWD)

SEEPAGE						
SLIP/ CRACK						
SETTLE-MENT	① near inboard edge			pot holes		→
EROSION						
VEGETA-TION	④ AA					
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

Plan View from Station 8+700 **to** 9+000 **Reference Location:** ______________

SEEPAGE						
SLIP/ CRACK	③ along upper slope					→
SETTLE-MENT						
EROSION						
VEGETA-TION	① to ②					→
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

In-board View from Station 8+700 **to** 9+000 **Reference Location:** ______________

SEEPAGE						
SLIP/ CRACK						
SETTLE-MENT						
EROSION						
VEGETA-TION	②					→
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

Out-board View from Station 8+700 **to** 9+000 **Reference Location:** ______________

SEEPAGE	SLIP/CRACK	SETTLEMENT	EROSION	VEGETATION
0 = None	0 = None	0 = None	0 = None	0 = Concrete/Paved
1 = Wet Spot	1 = Shallow slip <2m	1 = Hummocky/Undulated	1 = Rill	1 = Bare to short grass
2 = Spring	2 = Deep seated slip >2m	2 = Sagged	2 = Gully	2 = Scrubb, brush
3 = Artesian/Boil	3 = Tension crack	3 = Sink hole/caving	3 = Sheet/channel	3 = Tree
4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify

DATE: 12/19/97 TIME: ______

PROJECT NO. 973017NB

WEATHER: Sunny

FIELD RECONNAISSANCE

RECORDED BY SH ~~EAST~~ / WEST LEVEE Field Crew: ML, NM, DG (SCVWD)

SEEPAGE	
SLIP/ CRACK	
SETTLE- MENT	① near inboard edge: loose/uncompacted material, initially longitudinal cracks; approx. ½" sag ② Tire rut near Tasman gate
EROSION	
VEGETA- TION	④ AA
REF. LOC.	⟵ Tasman Bridge ⟶

0+050 0+100 0+150 0+200 0+250 0+300

Plan View from Station 9+000 **to** 9+300 **Reference Location:** ______

SEEPAGE	Bu cluster
SLIP/ CRACK	⟵ poorly compacted to approx 1 ft. from edge ⟶
SETTLE- MENT	
EROSION	① ⟶
VEGETA- TION	① to ② ⟶
REF. LOC.	

0+050 0+100 0+150 0+200 0+250 0+300

In-board View from Station 9+000 **to** 9+300 **Reference Location:** ______

SEEPAGE	Ditch continued; steep slope @ 1 to 1 ⟶ ① @ toe Bu @ edge Bu
SLIP/ CRACK	
SETTLE- MENT	
EROSION	
VEGETA- TION	② ⟶
REF. LOC.	↑ Reclaimed water pipe jacking operation

0+050 0+100 0+150 0+200 0+250 0+300

Out-board View from Station 9+000 **to** 9+300 **Reference Location:** ______

SEEPAGE	SLIP/CRACK	SETTLEMENT	EROSION	VEGETATION
0 = None	0 = None	0 = None	0 = None	0 = Concrete/Paved
1 = Wet Spot	1 = Shallow slip <2m	1 = Hummocky/Undulated	1 = Rill	1 = Bare to short grass
2 = Spring	2 = Deep seated slip >2m	2 = Sagged	2 = Gully	2 = Scrubb, brush
3 = Artesian/Boil	3 = Tension crack	3 = Sink hole/caving	3 = Sheet/channel	3 = Tree
4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify

DATE: 12/19/97 TIME: ______

PROJECT NO. 973017NB

WEATHER: Sunny

FIELD RECONNAISSANCE

RECORDED BY SH

~~EAST~~ / WEST LEVEE FIELD CREW: ML, NM, DG (Scum?)

SEEPAGE						
SLIP/ CRACK						
SETTLE- MENT				X Tree nut @ edge (2m)		
EROSION						
VEGETA- TION	④ 1A					
REF. LOC.						
		0+050	0+100	0+150	0+200	0+250	0+300

Plan View from Station 9+300 **to** 9+600 **Reference Location:** ______

SEEPAGE			① Wet slope face	Bu		
SLIP/ CRACK						
SETTLE- MENT						
EROSION						
VEGETA- TION	②					
REF. LOC.						
		0+050	0+100	0+150	0+200	0+250	0+300

In-board View from Station 9+300 **to** 9+600 **Reference Location:** ______

SEEPAGE					ⓧ 18" flop gate outfall seep	
SLIP/ CRACK						
SETTLE- MENT						
EROSION					③ upper edge of slope	
VEGETA- TION	① to ②					
REF. LOC.						
		0+050	0+100	0+150	0+200	0+250	0+300

Out-board View from Station 9+300 **to** 9+600 **Reference Location:** ______

SEEPAGE	SLIP/CRACK	SETTLEMENT	EROSION	VEGETATION
0 = None	0 = None	0 = None	0 = None	0 = Concrete/Paved
1 = Wet Spot	1 = Shallow slip <2m	1 = Hummocky/Undulated	1 = Rill	1 = Bare to short grass
2 = Spring	2 = Deep seated slip >2m	2 = Sagged	2 = Gully	2 = Scrubb, brush
3 = Artesian/Boil	3 = Tension crack	3 = Sink hole/caving	3 = Sheet/channel	3 = Tree
4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify

DATE: 12/19/97 TIME: ______________ **PROJECT NO. 973017NB**

WEATHER: SUNNY

FIELD RECONNAISSANCE

RECORDED BY SH **~~EAST~~ / WEST LEVEE** FIELD CREW : ML, NM, DG(SCVWD

SEEPAGE						
SLIP/ CRACK						
SETTLE-MENT						
EROSION						
VEGETA-TION	④ AA					
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

Plan View from Station 9+600 **to** 9+900 **Reference Location:** ______________

SEEPAGE						
SLIP/ CRACK		Surface cracks fm toe to crest →				
SETTLE-MENT						
EROSION		② →	③ →			→
VEGETA-TION	② →					→
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

In-board View from Station 9+600 **to** 9+900 **Reference Location:** ______________

SEEPAGE				⊗ 18" flap gate, outfall SCSP; 1/4 pipe fill.		
SLIP/ CRACK				← steep sideslope* →		
SETTLE-MENT						
EROSION			③	③ ← upper '18' steep sideslope →		
VEGETA-TION	① to ② →					
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

Out-board View from Station 9+600 **to** 9+900 **Reference Location:** ______________

* Stability check

SEEPAGE	SLIP/CRACK	SETTLEMENT	EROSION	VEGETATION
0 = None	0 = None	0 = None	0 = None	0 = Concrete/Paved
1 = Wet Spot	1 = Shallow slip <2m	1 = Hummocky/Undulated	1 = Rill	1 = Bare to short grass
2 = Spring	2 = Deep seated slip >2m	2 = Sagged	2 = Gully	2 = Scrubb, brush
3 = Artesian/Boil	3 = Tension crack	3 = Sink hole/caving	3 = Sheet/channel	3 = Tree
4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify

DATE: 12/19/97 TIME: ____________

PROJECT NO. 973017NB

WEATHER: Sunny

FIELD RECONNAISSANCE

RECORDED BY SH

~~EAST~~ / WEST LEVEE Field Crew: ML, NM, DG (Sc

SEEPAGE						
SLIP/ CRACK						
SETTLE-MENT		← Tire pit →				
EROSION						
VEGETA-TION	④ AA					
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

Plan View from Station 9+900 **to** 10+200 **Reference Location:** ____________

SEEPAGE	Bu				Bu	
SLIP/ CRACK						
SETTLE-MENT						
EROSION						
VEGETA-TION						
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

In-board View from Station 9+900 **to** 10+200 **Reference Location:** ____________

SEEPAGE						
SLIP/ CRACK					× 8m long crack near edge.	
SETTLE-MENT						
EROSION			② bike tracks			③ surface erosion
VEGETA-TION						
REF. LOC.						↑ Hetch-Hetchy Crossing
	0+050	0+100 10+000	0+150	0+200 10+100	0+250	0+300 0

Out-board View from Station 9+900 **to** 10+200 **Reference Location:** ____________

SEEPAGE	SLIP/CRACK	SETTLEMENT	EROSION	VEGETATION
0 = None	0 = None	0 = None	0 = None	0 = Concrete/Paved
1 = Wet Spot	1 = Shallow slip <2m	1 = Hummocky/Undulated	1 = Rill	1 = Bare to short grass
2 = Spring	2 = Deep seated slip >2m	2 = Sagged	2 = Gully	2 = Scrubb, brush
3 = Artesian/Boil	3 = Tension crack	3 = Sink hole/caving	3 = Sheet/channel	3 = Tree
4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify

DATE: 12/19/97 TIME: ______ **PROJECT NO. 973017NB**

WEATHER: SUNNY

FIELD RECONNAISSANCE

RECORDED BY SH ~~EAST~~ / WEST LEVEE FIELD CREW: ML, NM, DG(SCVWD)

SEEPAGE						
SLIP/ CRACK						
SETTLE-MENT						
EROSION						
VEGETA-TION	④ A4					
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

Plan View from Station 10+200 **to** 10+500 **Reference Location:** ______

SEEPAGE						
SLIP/ CRACK						
SETTLE-MENT						
EROSION					x ② ③ ⟶	⟶
VEGETA-TION	① to ② ⟶	⟶	⟶	⟶	⟶	⟶
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

In-board View from Station 10+200 **to** 10+500 **Reference Location:** ______

SEEPAGE						
SLIP/ CRACK					⟷ From 1m below crest to toe scraped off slightly by grading contractor	
SETTLE-MENT						
EROSION						
VEGETA-TION	① ⟶	⟶	⟶	⟶	⟶	⟶
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

⊗ Demarks Well

*Slope face disturbed.

Out-board View from Station 10+200 **to** 10+600 **Reference Location:** ______

SEEPAGE	SLIP/CRACK	SETTLEMENT	EROSION	VEGETATION
0 = None	0 = None	0 = None	0 = None	0 = Concrete/Paved
1 = Wet Spot	1 = Shallow slip <2m	1 = Hummocky/Undulated	1 = Rill	1 = Bare to short grass
2 = Spring	2 = Deep seated slip >2m	2 = Sagged	2 = Gully	2 = Scrubb, brush
3 = Artesian/Boil	3 = Tension crack	3 = Sink hole/caving	3 = Sheet/channel	3 = Tree
4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify

DATE: 12/19/97 TIME: ______

PROJECT NO. 973017NB

WEATHER: SUNNY

FIELD RECONNAISSANCE

RECORDED BY SH

~~EAST~~ / WEST LEVEE FIELD CREW: ML, NM, DG (SCVWD)

SEEPAGE						
SLIP/ CRACK						
SETTLE-MENT						
EROSION						
VEGETA-TION	④ AA					
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

Plan View from Station 10+500 **to** 10+800 **Reference Location:** ______

SEEPAGE	Bu		⊗ 12" outfall Located mid height of levee with unknown inlet source?			⊗ 48" flap gate outfall
SLIP/ CRACK						
SETTLE-MENT						
EROSION	② ×				③ ←→	
VEGETA-TION						
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

In-board View from Station 10+500 **to** 10+800 **Reference Location:** ______

SEEPAGE						
SLIP/ CRACK						
SETTLE-MENT						
EROSION						
VEGETA-TION						
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

Out-board View from Station 10+500 **to** 10+800 **Reference Location:** ______

SEEPAGE	SLIP/CRACK	SETTLEMENT	EROSION	VEGETATION
0 = None	0 = None	0 = None	0 = None	0 = Concrete/Paved
1 = Wet Spot	1 = Shallow slip <2m	1 = Hummocky/Undulated	1 = Rill	1 = Bare to short grass
2 = Spring	2 = Deep seated slip >2m	2 = Sagged	2 = Gully	2 = Scrubb, brush
3 = Artesian/Boil	3 = Tension crack	3 = Sink hole/caving	3 = Sheet/channel	3 = Tree
4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify

DATE: 12/19/97 TIME: ________________ **PROJECT NO. 973017NB**

WEATHER: SUNNY

FIELD RECONNAISSANCE

RECORDED BY SH ~~EAST~~ / WEST LEVEE FIELD CREW: ML, NM, DG (SCVWD)

SEEPAGE						
SLIP/ CRACK						
SETTLE-MENT						
EROSION						
VEGETA-TION	④ AA					
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

Plan View from Station 10+800 **to** 11+100 **Reference Location:** ________________

SEEPAGE		⊗ 18" CMP ⊗ Plugged Monitoring Well		⊗ 18" CMP flapgate	⊗ Locked Well	
SLIP/ CRACK						
SETTLE-MENT						
EROSION		↔ 13 m scour at toe		↔ 20 m scour		
VEGETA-TION						
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

In-board View from Station 10+800 **to** 11+100 **Reference Location:** ________________

SEEPAGE	Bu					
SLIP/ CRACK						
SETTLE-MENT						
EROSION						
VEGETA-TION			⟼ Lick Mill	property fence ;	landscaped	with irrigation [illegible] →
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

Out-board View from Station 10+800 **to** 11+100 **Reference Location:** ________________

SEEPAGE	SLIP/CRACK	SETTLEMENT	EROSION	VEGETATION
0 = None	0 = None	0 = None	0 = None	0 = Concrete/Paved
1 = Wet Spot	1 = Shallow slip <2m	1 = Hummocky/Undulated	1 = Rill	1 = Bare to short grass
2 = Spring	2 = Deep seated slip >2m	2 = Sagged	2 = Gully	2 = Scrubb, brush
3 = Artesian/Boil	3 = Tension crack	3 = Sink hole/caving	3 = Sheet/channel	3 = Tree
4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify

DATE: 12/19/97 } 12/22/97 TIME: ____________ **PROJECT NO. 973017NB**

WEATHER: Sunny, Clear Sky

FIELD RECONNAISSANCE

RECORDED BY SH ~~EAST~~ / WEST LEVEE 12/19 Field Crew : ML, NM, DG (SCVWD)
12/22 Field Crew : ML, D , DG (SCVWD)

SEEPAGE		← 12/19	12/22 →			
SLIP/ CRACK						
SETTLE-MENT						
EROSION						
VEGETA-TION	④ AA					
REF. LOC.		Satellite dish				
	0+050	0+100	0+150	0+200	0+250	0+300

Plan View from Station 11+100 **to** 11+400 **Reference Location:** ____________

SEEPAGE		⊗ 18" cmp	Bu Bu			
SLIP/ CRACK						
SETTLE-MENT						
EROSION						
VEGETA-TION					③	
REF. LOC.		Repaired section of levee after destruction of well				
	0+050	0+100	0+150	0+200	0+250	0+300

In-board View from Station 11+100 **to** 11+400 **Reference Location:** ____________

SEEPAGE						
SLIP/ CRACK			Over steepened side slope of 1995 lift →			
SETTLE-MENT						
EROSION						
VEGETA-TION	landscaped →					
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

Out-board View from Station 11+100 **to** 11+400 **Reference Location:** ____________

SEEPAGE	SLIP/CRACK	SETTLEMENT	EROSION	VEGETATION
0 = None	0 = None	0 = None	0 = None	0 = Concrete/Paved
1 = Wet Spot	1 = Shallow slip <2m	1 = Hummocky/Undulated	1 = Rill	1 = Bare to short grass
2 = Spring	2 = Deep seated slip >2m	2 = Sagged	2 = Gully	2 = Scrubb, brush
3 = Artesian/Boil	3 = Tension crack	3 = Sink hole/caving	3 = Sheet/channel	3 = Tree
4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify

DATE: 12/22/97 **TIME:** ____________

PROJECT NO. 973017NB

WEATHER: Sunny, COLD

FIELD RECONNAISSANCE

RECORDED BY SH

~~EAST~~ / WEST LEVEE FIELD CREW: ML, D, DG (SCVWD)

SEEPAGE						
SLIP/ CRACK						
SETTLE-MENT						
EROSION						
VEGETA-TION	④ AA					
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

Plan View from Station 11+400 **to** 11+700 **Reference Location:** ____________

SEEPAGE		Bu cluster				
SLIP/ CRACK		Crack				
SETTLE-MENT						
EROSION		②				②
VEGETA-TION	①	① to ②	②	—	—	—→
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

2m

Longitudinal crack; w/ ½m width bare strip

In-board View from Station 11+400 **to** 11+700 **Reference Location:** ____________

SEEPAGE						
SLIP/ CRACK						③ 187' (60 m)
SETTLE-MENT						crack
EROSION						
VEGETA-TION	Landscaped	—	—	—	—	—→
REF. LOC.	Complex	With basement	garage			
	0+050	0+100	0+150	0+200	0+250	0+300

longitudinal

Out-board View from Station 11+400 **to** 11+700 **Reference Location:** ____________

SEEPAGE	SLIP/CRACK	SETTLEMENT	EROSION	VEGETATION
0 = None	0 = None	0 = None	0 = None	0 = Concrete/Paved
1 = Wet Spot	1 = Shallow slip <2m	1 = Hummocky/Undulated	1 = Rill	1 = Bare to short grass
2 = Spring	2 = Deep seated slip >2m	2 = Sagged	2 = Gully	2 = Scrubb, brush
3 = Artesian/Boil	3 = Tension crack	3 = Sink hole/caving	3 = Sheet/channel	3 = Tree
4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify

DATE: 12/22/97 **TIME:** ______

PROJECT NO. 973017NB

WEATHER: SUNNY , WINDY

FIELD RECONNAISSANCE

RECORDED BY SH

~~EAST~~ / WEST LEVEE FIELD CREW : ML , D , DG (SCVWD)

SEEPAGE						
SLIP/ CRACK						
SETTLE-MENT						
EROSION						
VEGETA-TION	⑤ AA →	→		④ AA →		
REF. LOC.			← MONTAGUE EXPY →			
	0+050	0+100 8	0+150	0+200 9	0+250	0+300 12+000

Plan View from Station 11+700 **to** 12+000 **Reference Location:** ______

SEEPAGE	⊗⊗⊗ Triple 48" outfall pipes	Bu		⑧ ←→ 72" outfall	blocked weep holes on concrete slope face	
SLIP/ CRACK					←→ 3' to 4' drop @ toe form inner slope	←→
SETTLE-MENT						
EROSION				②	* ¼ ton rock rip rap bank protection	
VEGETA-TION	① →	→				
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

In-board View from Station 11+700 **to** 12+000 **Reference Location:** ______

SEEPAGE		Bu				
SLIP/ CRACK	|—	—| Longitudinal crack				
SETTLE-MENT						
EROSION						
VEGETA-TION	① →	→				
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

Out-board View from Station 11+700 **to** 12+000 **Reference Location:** ______

SEEPAGE	SLIP/CRACK	SETTLEMENT	EROSION	VEGETATION
0 = None	0 = None	0 = None	0 = None	0 = Concrete/Paved
1 = Wet Spot	1 = Shallow slip <2m	1 = Hummocky/Undulated	1 = Rill	1 = Bare to short grass
2 = Spring	2 = Deep seated slip >2m	2 = Sagged	2 = Gully	2 = Scrubb, brush
3 = Artesian/Boil	3 = Tension crack	3 = Sink hole/caving	3 = Sheet/channel	3 = Tree
4 = Other, specify	4 = Other, specify	4 = Other, specify	4 = Other, specify	4 = Other, specify

DATE: 12/22/97 TIME: ______ **PROJECT NO. 973017NB**

WEATHER: SUNNY, WINDY

FIELD RECONNAISSANCE

RECORDED BY SH ~~EAST~~ / WEST LEVEE FIELD CREW: ML, D, DG (SCWD)

SEEPAGE						
SLIP/ CRACK						
SETTLE-MENT						
EROSION					③ →	
VEGETA-TION	④ AA					
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

Plan View from Station 12+000 **to** 12+300 **Reference Location:** ______

* stability check; need section survey

SEEPAGE						
SLIP/ CRACK	*steep drop off near toe form 3' to 4' shelf →					
SETTLE-MENT						
EROSION						
VEGETA-TION					③	③
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

In-board View from Station 12+000 **to** 12+300 **Reference Location:** ______

SEEPAGE		⊗ Irrigation sprinkler @ toe				
SLIP/ CRACK						
SETTLE-MENT						(Unauthorized access ladder cut into levee
EROSION						
VEGETA-TION					③	③
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

Out-board View from Station 12+000 **to** 12+300 **Reference Location:** ______

SEEPAGE	SLIP/CRACK	SETTLEMENT	EROSION	VEGETATION
0 = None	0 = None	0 = None	0 = None	0 = Concrete/Paved
1 = Wet Spot	1 = Shallow slip <2m	1 = Hummocky/Undulated	1 = Rill	1 = Bare to short grass
2 = Spring	2 = Deep seated slip >2m	2 = Sagged	2 = Gully	2 = Scrubb, brush
3 = Artesian/Boil	3 = Tension crack	3 = Sink hole/caving	3 = Sheet/channel	3 = Tree
4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify

DATE: 12/22/97 TIME: ____________ PROJECT NO. 973017NB

WEATHER: SUNNY, WINDY

FIELD RECONNAISSANCE

RECORDED BY SH

~~EAST~~ / WEST LEVEE FIELD CREW: ML, D, DG (SCVWD)

SEEPAGE						
SLIP/ CRACK						
SETTLE-MENT						
EROSION						
VEGETA-TION	④ AA					
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

Plan View from Station 12+300 to 12+600 Reference Location: ____________

* stability Check
* need section survey

SEEPAGE				⊗ 48" ⊗ 48"		Bu
SLIP/ CRACK	* steep drop off near toe from 3' to 4' sluff →	→	→			
SETTLE-MENT						
EROSION				④ * around rip rap foundation		
VEGETA-TION	③ →	→	→	→	→	→
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

In-board View from Station 12+300 to 12+600 Reference Location: ____________

SEEPAGE						
SLIP/ CRACK						
SETTLE-MENT						
EROSION						
VEGETA-TION	③ →	→	→	→	→	①
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

Out-board View from Station 12+300 to 12+600 Reference Location: ____________

SEEPAGE	SLIP/CRACK	SETTLEMENT	EROSION	VEGETATION
0 = None	0 = None	0 = None	0 = None	0 = Concrete/Paved
1 = Wet Spot	1 = Shallow slip <2m	1 = Hummocky/Undulated	1 = Rill	1 = Bare to short grass
2 = Spring	2 = Deep seated slip >2m	2 = Sagged	2 = Gully	2 = Scrubb, brush
3 = Artesian/Boil	3 = Tension crack	3 = Sink hole/caving	3 = Sheet/channel	3 = Tree
4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify

DATE: 12/22/97 TIME: ____________

PROJECT NO. 973017NB

WEATHER: SUNNY, WINDY

FIELD RECONNAISSANCE

RECORDED BY SH

~~EAST~~ / WEST LEVEE FIELD CREW: ML, D, DG (SCVWD)

SEEPAGE						
SLIP/ CRACK						
SETTLE-MENT						
EROSION						
VEGETA-TION						
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

Plan View from Station 12+600 **to** 12+900 **Reference Location:** ____________

SEEPAGE		Bu				
SLIP/ CRACK				Steep side slope. old maintenance ramp		15' to 20' longitudinal crack
SETTLE-MENT						
EROSION						
VEGETA-TION	③ →				① to ② →	
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

In-board View from Station 12+600 **to** 12+900 **Reference Location:** ____________

SEEPAGE						
SLIP/ CRACK				④ Buldged at toe slightly; pushed fence outward		④ Buldged at toe
SETTLE-MENT						
EROSION						
VEGETA-TION	⑦ →					
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

Out-board View from Station 12+600 **to** 12+900 **Reference Location:** ____________

SEEPAGE	SLIP/CRACK	SETTLEMENT	EROSION	VEGETATION
0 = None	0 = None	0 = None	0 = None	0 = Concrete/Paved
1 = Wet Spot	1 = Shallow slip <2m	1 = Hummocky/Undulated	1 = Rill	1 = Bare to short grass
2 = Spring	2 = Deep seated slip >2m	2 = Sagged	2 = Gully	2 = Scrubb, brush
3 = Artesian/Boil	3 = Tension crack	3 = Sink hole/caving	3 = Sheet/channel	3 = Tree
4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify

DATE: 12/22/97 TIME: ____________ **PROJECT NO. 973017NB**

WEATHER: SUNNY, WINDY

FIELD RECONNAISSANCE

RECORDED BY SH ~~EAST~~ / WEST LEVEE FIELD CREW : ML, D , DG (SCVWD

SEEPAGE						
SLIP/ CRACK						
SETTLE-MENT						
EROSION						
VEGETA-TION	④ AA					
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

Plan View from Station 12+900 **to** 13+200 **Reference Location:** ____________

SEEPAGE						
SLIP/ CRACK						
SETTLE-MENT						
EROSION						
VEGETA-TION	① to ② →	→	→	→	→	→
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

In-board View from Station 12+900 **to** 13+200 **Reference Location:** ____________

SEEPAGE						
SLIP/ CRACK						
SETTLE-MENT						
EROSION						
VEGETA-TION	① →	→	→	→	→	→
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

Out-board View from Station 12+900 **to** 13+200 **Reference Location:** ____________

SEEPAGE	SLIP/CRACK	SETTLEMENT	EROSION	VEGETATION
0 = None	0 = None	0 = None	0 = None	0 = Concrete/Paved
1 = Wet Spot	1 = Shallow slip <2m	1 = Hummocky/Undulated	1 = Rill	1 = Bare to short grass
2 = Spring	2 = Deep seated slip >2m	2 = Sagged	2 = Gully	2 = Scrubb, brush
3 = Artesian/Boil	3 = Tension crack	3 = Sink hole/caving	3 = Sheet/channel	3 = Tree
4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify

DATE: 12/22/97 TIME: ______

PROJECT NO. 973017NB

WEATHER: SUNNY, WINDY

FIELD RECONNAISSANCE

RECORDED BY SH

~~EAST /~~ WEST LEVEE FIELD CREW: ML, D, DG (SCVWD)

	0+050	0+100	0+150	0+200	0+250	0+300
SEEPAGE						
SLIP/ CRACK						
SETTLE-MENT			③ Sagged m/slope			
EROSION						
VEGETA-TION	④ AA					
REF. LOC.						

Plan View from Station 13+200 **to** 13+500 **Reference Location:** ______

	0+050	0+100	0+150	0+200	0+250	0+300
SEEPAGE	× SCSP w/o outfall pipe	⊗ 60" Concrete pipe	⊗ 60" CMP	⊗ 36" CMP		
SLIP/ CRACK						
SETTLE-MENT				Soft @ toe		
EROSION						① Bare spots near crest
VEGETA-TION	① to ② →	→	→	→	→	→
REF. LOC.						

In-board View from Station 13+200 **to** 13+500 **Reference Location:** ______

	0+050	0+100	0+150	0+200	0+250	0+300
SEEPAGE						
SLIP/ CRACK						
SETTLE-MENT						
EROSION						
VEGETA-TION	① →	→	→	→	→	→
REF. LOC.						

Out-board View from Station 13+200 **to** 13+500 **Reference Location:** ______

SEEPAGE	SLIP/CRACK	SETTLEMENT	EROSION	VEGETATION
0 = None	0 = None	0 = None	0 = None	0 = Concrete/Paved
1 = Wet Spot	1 = Shallow slip <2m	1 = Hummocky/Undulated	1 = Rill	1 = Bare to short grass
2 = Spring	2 = Deep seated slip >2m	2 = Sagged	2 = Gully	2 = Scrubb, brush
3 = Artesian/Boil	3 = Tension crack	3 = Sink hole/caving	3 = Sheet/channel	3 = Tree
4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify

DATE: 12/22/97 TIME: ______ **PROJECT NO. 973017NB**

WEATHER: SUNNY, WINDY

FIELD RECONNAISSANCE

RECORDED BY SH ~~EAST~~ / WEST LEVEE FIELD CREW: ML, D , DG (SOUND

SEEPAGE						
SLIP/ CRACK						
SETTLE-MENT						
EROSION						
VEGETA-TION	① AA			→		
REF. LOC.				TRIMBLE RD		
	0+050	0+100	0+150	0+200	0+250	0+300

Plan View from Station 13+500 **to** 13+800 **Reference Location:** ______

SEEPAGE		ⓧ gas line crossing		Abandoned outfall Bu		
SLIP/ CRACK		Newly cut access road				
SETTLE-MENT						
EROSION				Minor piping underneath bridge abutment		
VEGETA-TION	① to ② →					
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

In-board View from Station 13+500 **to** 13+800 **Reference Location:** ______

SEEPAGE	Bu					
SLIP/ CRACK						
SETTLE-MENT						
EROSION						
VEGETA-TION	① →					
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

Out-board View from Station 13+500 **to** 13+800 **Reference Location:** ______

SEEPAGE	SLIP/CRACK	SETTLEMENT	EROSION	VEGETATION
0 = None	0 = None	0 = None	0 = None	0 = Concrete/Paved
1 = Wet Spot	1 = Shallow slip <2m	1 = Hummocky/Undulated	1 = Rill	1 = Bare to short grass
2 = Spring	2 = Deep seated slip >2m	2 = Sagged	2 = Gully	2 = Scrubb, brush
3 = Artesian/Boil	3 = Tension crack	3 = Sink hole/caving	3 = Sheet/channel	3 = Tree
4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify

DATE: 12/22/97 TIME: ____

PROJECT NO. 973017NB

WEATHER: SUNNY, WINDY

FIELD RECONNAISSANCE

RECORDED BY SH ~~EAST~~/ WEST LEVEE

FIELD CREW: ML, D, DG (SCVWD)

SEEPAGE						
SLIP/ CRACK						
SETTLE-MENT			← Tire rut →			
EROSION						
VEGETA-TION						
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

Plan View from Station 13+800 **to** 14+100 **Reference Location:** ____

SEEPAGE	Bu		48" cmp ⊗ partially blocked		72"cmp ⊗ 72"rcp ⊗	
SLIP/ CRACK	④ Shrinkage	cracks →	→	→	→	→
SETTLE-MENT					* Crack around concrete conduit, settlement of foundation?	
EROSION						
VEGETA-TION	②					
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

In-board View from Station 13+800 **to** 14+100 **Reference Location:** ____

SEEPAGE						
SLIP/ CRACK	④ Shrinkage crack →	→	→	→	→	→
SETTLE-MENT						
EROSION						
VEGETA-TION	① →	→	→	→	③ ↓ →	→
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

Out-board View from Station 13+800 **to** 14+100 **Reference Location:** ____

SEEPAGE	SLIP/CRACK	SETTLEMENT	EROSION	VEGETATION
0 = None	0 = None	0 = None	0 = None	0 = Concrete/Paved
1 = Wet Spot	1 = Shallow slip <2m	1 = Hummocky/Undulated	1 = Rill	1 = Bare to short grass
2 = Spring	2 = Deep seated slip >2m	2 = Sagged	2 = Gully	2 = Scrubb, brush
3 = Artesian/Boil	3 = Tension crack	3 = Sink hole/caving	3 = Sheet/channel	3 = Tree
4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify

DATE: 12/22/97 TIME: ______

PROJECT NO. 973017NB

WEATHER: SUNNY, WINDY

FIELD RECONNAISSANCE

RECORDED BY SH

~~EAST~~ / WEST LEVEE FIELD CREW : ML, D, DG(SCUWD

SEEPAGE						
SLIP/ CRACK						
SETTLE-MENT	←Tire rut, shrinkage cracks→					
EROSION						
VEGETA-TION						
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

Plan View from Station 14+100 to 14+400 Reference Location: ______

SEEPAGE						
SLIP/ CRACK	shrinkage cracks →					
SETTLE-MENT						
EROSION						
VEGETA-TION	② w/ occasional large trees →					
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

In-board View from Station 14+100 to 14+400 Reference Location: ______

SEEPAGE						
SLIP/ CRACK	shrinkage cracks →					
SETTLE-MENT						
EROSION						
VEGETA-TION	① →					
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

Out-board View from Station 14+100 to 14+400 Reference Location: ______

SEEPAGE	SLIP/CRACK	SETTLEMENT	EROSION	VEGETATION
0 = None	0 = None	0 = None	0 = None	0 = Concrete/Paved
1 = Wet Spot	1 = Shallow slip <2m	1 = Hummocky/Undulated	1 = Rill	1 = Bare to short grass
2 = Spring	2 = Deep seated slip >2m	2 = Sagged	2 = Gully	2 = Scrubb, brush
3 = Artesian/Boil	3 = Tension crack	3 = Sink hole/caving	3 = Sheet/channel	3 = Tree
4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify

DATE: 12/22/97 TIME: ______________

PROJECT NO. 973017NB

FIELD RECONNAISSANCE

WEATHER: SUNNY, WINDY

RECORDED BY SH

~~EAST~~ / WEST LEVEE FIELD CREW: ML, D, DG(SCVWD)

SEEPAGE						
SLIP/ CRACK				③		
SETTLE- MENT						
EROSION						
VEGETA- TION						
REF. LOC.			← US 101 →			Island Bridge

0+050 0+100 0+150 0+200 0+250 0+300

Plan View from Station 14+400 **to** 14+700 **Reference Location:** ______________

SEEPAGE	Disturbed slope surface (from tree removal.			ⓥ⊗⊗⊗ 60" 72" partially flushed		
SLIP/ CRACK	Steep side slope >1 to 1			③ Twin 30" outflows @ crest ↑② @ toe cracks on concrete side wall		
SETTLE- MENT				of 72" outfall Rubble steep slope > 1 to 1		
EROSION				②		
VEGETA- TION	② w/ occasional large trees					
REF. LOC.			← US 101 →			

0+050 0+100 0+150 0+200 0+250 0+300

In-board View from Station 14+400 **to** 14+700 **Reference Location:** ______________

SEEPAGE						
SLIP/ CRACK						
SETTLE- MENT						
EROSION						
VEGETA- TION						
REF. LOC.			← US 101 →			

0+050 0+100 0+150 0+200 0+250 0+300

Out-board View from Station 14+400 **to** 14+700 **Reference Location:** ______________

SEEPAGE	SLIP/CRACK	SETTLEMENT	EROSION	VEGETATION
0 = None	0 = None	0 = None	0 = None	0 = Concrete/Paved
1 = Wet Spot	1 = Shallow slip <2m	1 = Hummocky/Undulated	1 = Rill	1 = Bare to short grass
2 = Spring	2 = Deep seated slip >2m	2 = Sagged	2 = Gully	2 = Scrubb, brush
3 = Artesian/Boil	3 = Tension crack	3 = Sink hole/caving	3 = Sheet/channel	3 = Tree
4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify

DATE: 12/23/97 **TIME:** 7:42

PROJECT NO. 973017NB

WEATHER: SUNNY, COLD

FIELD RECONNAISSANCE

RECORDED BY SH

~~EAST~~ / WEST LEVEE FIELD CREW: ML, D, DG (SCVWD)

SEEPAGE						
SLIP/ CRACK						
SETTLE-MENT		①	Tire rut			
EROSION						
VEGETA-TION						
REF. LOC.						
	0+050	0+100	0+150	0+200 9	0+250	0+300 15+

Plan View from Station 14+700 **to** 15+~~0~~800 **Reference Location:** ______________

SEEPAGE		ⓧ	36" CMP ⓧ 24" CMP			
SLIP/ CRACK		③ ⓧ	SCSP ⓚ' SLOPE CHANGE steeper @ [illegible]			
SETTLE-MENT		①				
EROSION	③ Slight undermining of culvert face @ inlet, will [illegible]	x ③				
VEGETA-TION	2	2	2			
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

In-board View from Station 14+700 **to** 15+000 **Reference Location:** ______________

SEEPAGE						
SLIP/ CRACK						
SETTLE-MENT						
EROSION						
VEGETA-TION			Landscape [illegible]	[illegible] trees		
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

Out-board View from Station 14+700 **to** 15+000 **Reference Location:** ______________

SEEPAGE	SLIP/CRACK	SETTLEMENT	EROSION	VEGETATION
0 = None	0 = None	0 = None	0 = None	0 = Concrete/Paved
1 = Wet Spot	1 = Shallow slip <2m	1 = Hummocky/Undulated	1 = Rill	1 = Bare to short grass
2 = Spring	2 = Deep seated slip >2m	2 = Sagged	2 = Gully	2 = Scrubb, brush
3 = Artesian/Boil	3 = Tension crack	3 = Sink hole/caving	3 = Sheet/channel	3 = Tree
4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify

DATE: 12/23 TIME: ______

PROJECT NO. 973017NB

WEATHER: SUNNY COLD

FIELD RECONNAISSANCE

RECORDED BY SH

~~EAST~~ / WEST LEVEE FIELD CREW: ML, D, DG (Scv...)

* Stability Check ; borehole location

SEEPAGE						
SLIP/ CRACK						
SETTLE-MENT						
EROSION						
VEGETA-TION						
REF. LOC.	TUNNEL ↑ ROAD SIGN					
	0+050	0+100	0+150	0+200	0+250	0+300

Plan View from Station 15+000 **to** 15+300 **Reference Location:** ______

SEEPAGE						
SLIP/ CRACK	Soft bank		↑ slope change @ Top steeper			
SETTLE-MENT						
EROSION						
VEGETA-TION	3					
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

In-board View from Station 15+000 **to** 15+300 **Reference Location:** ______

SEEPAGE						
SLIP/ CRACK			longitudinal crack along roadway (asphalt patched)			→ 365 →|
SETTLE-MENT						
EROSION						
VEGETA-TION						
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

Out-board View from Station 15+000 **to** 15+300 **Reference Location:** ______

SEEPAGE	SLIP/CRACK	SETTLEMENT	EROSION	VEGETATION
0 = None	0 = None	0 = None	0 = None	0 = Concrete/Paved
1 = Wet Spot	1 = Shallow slip <2m	1 = Hummocky/Undulated	1 = Rill	1 = Bare to short grass
2 = Spring	2 = Deep seated slip >2m	2 = Sagged	2 = Gully	2 = Scrubb, brush
3 = Artesian/Boil	3 = Tension crack	3 = Sink hole/caving	3 = Sheet/channel	3 = Tree
4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify

DATE: 12/23 TIME: ____________

PROJECT NO. 973017NB

WEATHER: SUNNY, COLD

FIELD RECONNAISSANCE

RECORDED BY SH

~~EAST~~ / WEST LEVEE Field Crew: ML, D , DG(SCVWD)

SEEPAGE						
SLIP/ CRACK						
SETTLE-MENT	———	① ——→				
EROSION	2	2				
VEGETA-TION						
REF. LOC.						

0+050 0+100 0+150 0+200 0+250 0+300

Plan View from Station 15+300 **to** 15+600 **Reference Location:** ____________

SEEPAGE			24" cmp ⊗ scsp		24" cmp ⊗ [illegible] ?	
SLIP/ CRACK		slope change steeper			⟷ slope change steeper @ the 15' fm crest	Steep @ toe 2'-3' cut
SETTLE-MENT						
EROSION					X some scour under scsp	⟷ @ toe scour
VEGETA-TION						
REF. LOC.						

0+050 0+100 0+150 0+200 0+250 0+300

In-board View from Station 15+300 **to** 15+600 **Reference Location:** ____________

SEEPAGE						
SLIP/ CRACK						
SETTLE-MENT						
EROSION						
VEGETA-TION		Easy slope / [illegible]				
REF. LOC.						

0+050 0+100 0+150 0+200 0+250 0+300

Out-board View from Station 15+300 **to** 15+600 **Reference Location:** ____________

SEEPAGE	SLIP/CRACK	SETTLEMENT	EROSION	VEGETATION
0 = None	0 = None	0 = None	0 = None	0 = Concrete/Paved
1 = Wet Spot	1 = Shallow slip <2m	1 = Hummocky/Undulated	1 = Rill	1 = Bare to short grass
2 = Spring	2 = Deep seated slip >2m	2 = Sagged	2 = Gully	2 = Scrubb, brush
3 = Artesian/Boil	3 = Tension crack	3 = Sink hole/caving	3 = Sheet/channel	3 = Tree
4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify

DATE: 12/23/97 TIME: ____________

PROJECT NO. 973017NB

WEATHER: SUNNY

FIELD RECONNAISSANCE

RECORDED BY SH

~~EAST~~ / WEST LEVEE

FIELD CREW: ML, D, DG (SCVWD)

SEEPAGE		Airport Parkway bridge ↓	54"/48" ⊗ S. Siphon			
SLIP/ CRACK		fill encroached possibly due to illegal dumping of material / construction of new power transmission tower.				
SETTLE-MENT			① tire rut ⟷			
EROSION						
VEGETA-TION						
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

Plan View from Station 15+600 **to** 15+900 **Reference Location:** ____________

SEEPAGE	18" ⊗ cmp	30" ⊗ flapgate outfall 60" ⊗ flapgate outfall		Bu		
SLIP/ CRACK	⟶ slope change scour		③① ⟷ steep slope	Steep sided ⟷ Access road		
SETTLE-MENT						
EROSION	ravaged scsp around pipe. scour		← some undermining of scsp, broken pieces adjacent to bridge			
VEGETA-TION	2~3	2~3				
REF. LOC.					⟵ drop structure ⟶	
	0+050	0+100	0+150	0+200	0+250	0+300

Concrete Channel 12" slab low flow concrete deck all b[illegible]

In-board View from Station 15+600 **to** 15+900 **Reference Location:** ____________

SEEPAGE						
SLIP/ CRACK						
SETTLE-MENT						
EROSION						
VEGETA-TION		⟵	originally planted w/ redwood trees cut remaining root, stub not known			
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

Out-board View from Station 15+600 **to** 15+900 **Reference Location:** ____________

SEEPAGE	SLIP/CRACK	SETTLEMENT	EROSION	VEGETATION
0 = None	0 = None	0 = None	0 = None	0 = Concrete/Paved
1 = Wet Spot	1 = Shallow slip <2m	1 = Hummocky/Undulated	1 = Rill	1 = Bare to short grass
2 = Spring	2 = Deep seated slip >2m	2 = Sagged	2 = Gully	2 = Scrubb, brush
3 = Artesian/Boil	3 = Tension crack	3 = Sink hole/caving	3 = Sheet/channel	3 = Tree
4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify

DATE: 12/23/97 TIME: ____________

PROJECT NO. 973017NB

WEATHER: Sunny

FIELD RECONNAISSANCE

RECORDED BY SH

~~EAST~~ / WEST LEVEE Field Crew: ML, D, PG (SCVWD)

	0+000–0+050	0+050–0+100	0+100–0+150	0+150–0+200	0+200–0+250	0+250–0+300
SEEPAGE			Bu			
SLIP/ CRACK						
SETTLE-MENT			Tire rut H			
EROSION						
VEGETA-TION						
REF. LOC.						

Plan View from Station 15+900 **to** 16+200 (16+000) **Reference Location:** ____________

	0+000–0+050	0+050–0+100	0+100–0+150	0+150–0+200	0+200–0+250	0+250–0+300
SEEPAGE		48" ⑧ Hwr outfall zone				
SLIP/ CRACK				Flatten side slope → to reduce scour and ave steepest slope		
SETTLE-MENT				③ near crest		
EROSION				②		
VEGETA-TION	②	→	→	→	→	①
REF. LOC.						

In-board View from Station 15+900 **to** 16+200 **Reference Location:** ____________

	0+000–0+050	0+050–0+100	0+100–0+150	0+150–0+200	0+200–0+250	0+250–0+300
SEEPAGE						
SLIP/ CRACK						
SETTLE-MENT						
EROSION						
VEGETA-TION	originally planted with redwood trees; all removed. roots, stubs probably left in place; [illegible] →					
REF. LOC.						

Out-board View from Station 15+900 **to** 16+200 **Reference Location:** ____________

SEEPAGE	SLIP/CRACK	SETTLEMENT	EROSION	VEGETATION
0 = None	0 = None	0 = None	0 = None	0 = Concrete/Paved
1 = Wet Spot	1 = Shallow slip <2m	1 = Hummocky/Undulated	1 = Rill	1 = Bare to short grass
2 = Spring	2 = Deep seated slip >2m	2 = Sagged	2 = Gully	2 = Scrubb, brush
3 = Artesian/Boil	3 = Tension crack	3 = Sink hole/caving	3 = Sheet/channel	3 = Tree
4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify

DATE: 12/23/97 TIME: ______ **PROJECT NO. 973017NB**

WEATHER: Sunny

FIELD RECONNAISSANCE

RECORDED BY SH ~~EAST~~/ WEST LEVEE FIELD CREW: ML, D, DG(SCVWD)

SEEPAGE						
SLIP/ CRACK						
SETTLE- MENT						
EROSION						
VEGETA- TION						
REF. LOC.						
	0+050	0+100 3	0+150	0+200 4	0+250	0+300 5

Plan View from Station 16+200 **to** 16+500 **Reference Location:** ______

SEEPAGE						
SLIP/ CRACK	Slope work for skyport ③					① with crack, slumps ×
SETTLE- MENT	Ruble fill (2' size) uncompacted					
EROSION	disturbed bank by construction	sporadic concrete rubble fill as rip rap				
VEGETA- TION						
REF. LOC.	SKYPORT BRIDGE					
	0+050	0+100	0+150	0+200	0+250	0+300

In-board View from Station 16+200 **to** 16+500 **Reference Location:** ______

SEEPAGE						
SLIP/ CRACK						
SETTLE- MENT						
EROSION						
VEGETA- TION						
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

Out-board View from Station 16+200 **to** 16+500 **Reference Location:** ______

SEEPAGE	SLIP/CRACK	SETTLEMENT	EROSION	VEGETATION
0 = None	0 = None	0 = None	0 = None	0 = Concrete/Paved
1 = Wet Spot	1 = Shallow slip <2m	1 = Hummocky/Undulated	1 = Rill	1 = Bare to short grass
2 = Spring	2 = Deep seated slip >2m	2 = Sagged	2 = Gully	2 = Scrubb, brush
3 = Artesian/Boil	3 = Tension crack	3 = Sink hole/caving	3 = Sheet/channel	3 = Tree
4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify

DATE: 12/23/97 TIME: ____

PROJECT NO. 973017NB

WEATHER: SUNNY

FIELD RECONNAISSANCE

RECORDED BY SH ~~EAST~~/ WEST LEVEE FIELD CREW: ML, D, DG (SCVWD)

	0+000–0+050	0+050–0+100	0+100–0+150	0+150–0+200	0+200–0+250	0+250–0+300
SEEPAGE						
SLIP/ CRACK						
SETTLE- MENT	① Trevut →	→	→	→		
EROSION						
VEGETA- TION						
REF. LOC.						

Plan View from Station 16+500 to 16+800 Reference Location: 8

	0+000–0+050	0+050–0+100	0+100–0+150	0+150–0+200	0+200–0+250	0+250–0+300
SEEPAGE		30" flap gate ⓧ outfall				
SLIP/ CRACK						
SETTLE- MENT						
EROSION	Miscellaneous fill,	concrete rubble ② Some erosion around	outfall structure	② ② →	→	→
VEGETA- TION	② some trees	② some trees				
REF. LOC.						

shear → slope in [illegible] @ the steeper angle cut for access

In-board View from Station 16+500 to 16+800 Reference Location: ____

	0+000–0+050	0+050–0+100	0+100–0+150	0+150–0+200	0+200–0+250	0+250–0+300
SEEPAGE						
SLIP/ CRACK						
SETTLE- MENT						
EROSION			②			
VEGETA- TION						
REF. LOC.			↑ Construction	staging area		

Out-board View from Station 16+500 to 16+800 Reference Location: ____

SEEPAGE	SLIP/CRACK	SETTLEMENT	EROSION	VEGETATION
0 = None	0 = None	0 = None	0 = None	0 = Concrete/Paved
1 = Wet Spot	1 = Shallow slip <2m	1 = Hummocky/Undulated	1 = Rill	1 = Bare to short grass
2 = Spring	2 = Deep seated slip >2m	2 = Sagged	2 = Gully	2 = Scrubb, brush
3 = Artesian/Boil	3 = Tension crack	3 = Sink hole/caving	3 = Sheet/channel	3 = Tree
4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify

DATE: 12/23/97 TIME: ______

PROJECT NO. 973017NB

WEATHER: SUNNY

FIELD RECONNAISSANCE

RECORDED BY SH

~~EAST~~ / WEST LEVEE FIELD CREW: ML, D, DG (SCVWD)

SEEPAGE						
SLIP/ CRACK						
SETTLE-MENT	① x	④ x		① x Tree cut		
EROSION						
VEGETA-TION						
REF. LOC.						
		0+050	0+100	0+150	0+200 17+000	0+250	0+300 17+1

Plan View from Station 16+800 **to** 17+100 **Reference Location:** ______

SEEPAGE				Storm Sewer crossing @ ℄		
SLIP/ CRACK			slope change → steeper @ toe 6' drop (1to1) 3' drop →	→	② x 8' drop →	→
SETTLE-MENT	Miscellaneous fill concrete rubble →	→	→	→	→	→
EROSION		② x @ toe		② x @ crest	③ x	
VEGETA-TION						
REF. LOC.						
		0+050	0+100	0+150	0+200	0+250	0+300

In-board View from Station 16+800 **to** 17+100 **Reference Location:** ______

SEEPAGE						
SLIP/ CRACK						
SETTLE-MENT						
EROSION						
VEGETA-TION						
REF. LOC.						
		0+050	0+100	0+150	0+200	0+250	0+300

Out-board View from Station 16+800 **to** 17+100 **Reference Location:** ______

SEEPAGE	SLIP/CRACK	SETTLEMENT	EROSION	VEGETATION
0 = None	0 = None	0 = None	0 = None	0 = Concrete/Paved
1 = Wet Spot	1 = Shallow slip <2m	1 = Hummocky/Undulated	1 = Rill	1 = Bare to short grass
2 = Spring	2 = Deep seated slip >2m	2 = Sagged	2 = Gully	2 = Scrubb, brush
3 = Artesian/Boil	3 = Tension crack	3 = Sink hole/caving	3 = Sheet/channel	3 = Tree
4 = Other, specify	4 = Other, specify	4 = Other, specify	4 = Other, specify	4 = Other, specify

DATE: 12/23/97 TIME: ______________

PROJECT NO. 973017NB

WEATHER: SUNNY

FIELD RECONNAISSANCE

RECORDED BY SH

~~EAST~~ / WEST LEVEE FIELD CREW: ML, D , DG(SCVWD)

SEEPAGE						
SLIP/ CRACK						
SETTLE-MENT						
EROSION						
VEGETA-TION						
REF. LOC.						
	0+050	2 0+100	0+150	3 0+200	0+250	0+300

Plan View from Station 17+100 **to** 17+400 **Reference Location:** ______________

* slabbing / crack

SEEPAGE						
SLIP/ CRACK	Slope Change 12' drop		① 12' drop ends gradually undermine	5' to 6' drop drop/shelf ends		20' drop from crest @ 1/2 to 1
SETTLE-MENT						
EROSION	miscellaneous fill on slope or inlets;		less erosion	concrete rubble	more	concrete rubble
VEGETA-TION	exposed tree roots @ toe		③	③		
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

In-board View from Station 17+100 **to** 17+400 **Reference Location:** ______________

SEEPAGE						
SLIP/ CRACK						
SETTLE-MENT						
EROSION						
VEGETA-TION						
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

Out-board View from Station 17+100 **to** 17+400 **Reference Location:** ______________

SEEPAGE	SLIP/CRACK	SETTLEMENT	EROSION	VEGETATION
0 = None	0 = None	0 = None	0 = None	0 = Concrete/Paved
1 = Wet Spot	1 = Shallow slip <2m	1 = Hummocky/Undulated	1 = Rill	1 = Bare to short grass
2 = Spring	2 = Deep seated slip >2m	2 = Sagged	2 = Gully	2 = Scrubb, brush
3 = Artesian/Boil	3 = Tension crack	3 = Sink hole/caving	3 = Sheet/channel	3 = Tree
4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify

DATE: 12/23/97 TIME: ______________ **PROJECT NO. 973017NB**

WEATHER: SUNNY

FIELD RECONNAISSANCE

RECORDED BY SH ~~EAST~~ / WEST LEVEE FIELD CREW: ML, D , DG (SCVWD)

SEEPAGE						
SLIP/ CRACK						
SETTLE-MENT						
EROSION						
VEGETA-TION						
REF. LOC.					I880	

0+050 0+100 0+150 0+200 0+250 0+300

Plan View from Station 17+400 **to** 17+550 **Reference Location:** ______________

SEEPAGE			36" flapgate outfall			
SLIP/ CRACK	steep slope	20' drop @ ½ to 1		① @ toe		
SETTLE-MENT						
EROSION			Heavy erosion around culvert structure	Scour; gabion protection		
VEGETA-TION						
REF. LOC.					I880	

0+050 0+100 0+150 0+200 0+250 0+300

In-board View from Station 17+400 **to** 17+550 **Reference Location:** ______________

SEEPAGE						
SLIP/ CRACK						
SETTLE-MENT						
EROSION						
VEGETA-TION						
REF. LOC.					I880	

0+050 0+100 0+150 0+200 0+250 0+300

Out-board View from Station 17+400 **to** 17+550 **Reference Location:** ______________

SEEPAGE	SLIP/CRACK	SETTLEMENT	EROSION	VEGETATION
0 = None	0 = None	0 = None	0 = None	0 = Concrete/Paved
1 = Wet Spot	1 = Shallow slip <2m	1 = Hummocky/Undulated	1 = Rill	1 = Bare to short grass
2 = Spring	2 = Deep seated slip >2m	2 = Sagged	2 = Gully	2 = Scrubb, brush
3 = Artesian/Boil	3 = Tension crack	3 = Sink hole/caving	3 = Sheet/channel	3 = Tree
4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify

SITE LOCATION

PROJECT NO. 973017NB

FIELD RECONNAISSANCE

APPROX. STATION: 6+180 to END **~~WEST /~~ EAST* LEVEE**

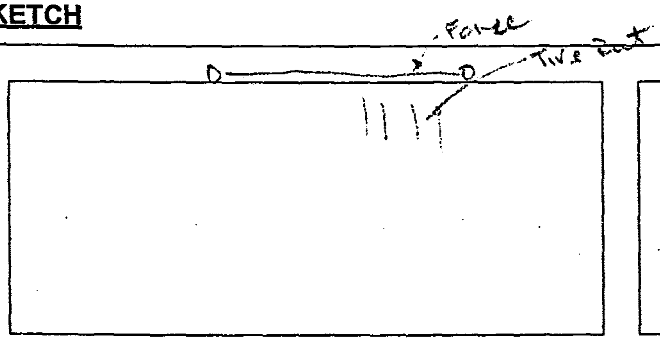
INBOARD / ~~OUTBOARD/ CREST*~~

*** Delete as appropriate**

DESCRIPTION

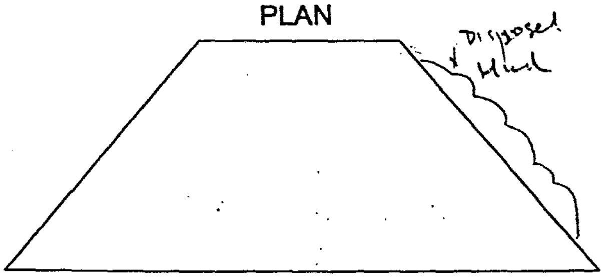
SEEPAGE	
SLIP/ CRACK	Dry MUD Disposed on the slope
SETTLE-MENT	
EROSION	
VEGETA-TION	

SKETCH



PLAN

Remarks:



CROSS-SECTION

SIDE

PHOTO REFERENCE
Roll No. Mike's 1 **Frame No.** 12

SEEPAGE	SLIP/CRACK	SETTLEMENT	EROSION	VEGETATION
0 = None	0 = None	0 = <10mm	0 = None	0 = Concrete/Paved
1 = Wet Spot	1 = Shallow slip <2m	1 = Hummocky/Undulated	1 = Rill	1 = Bare
2 = Spring	2 = Deep seated slip >2m	2 = Sagged	2 = Gully	2 = Grass, scrubb
3 = Artesian/Boil	3 = Tension crack	3 = Sink hole/caving	3 = Sheet/channel	3 = Tree
4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify

SITE LOCATION

PROJECT NO. 973017NB

FIELD RECONNAISSANCE

APPROX. STATION: 6+270 **~~WEST/~~ EAST* LEVEE**

INBOARD / ~~OUTBOARD/ CREST~~* OLD CANERY

*** Delete as appropriate**

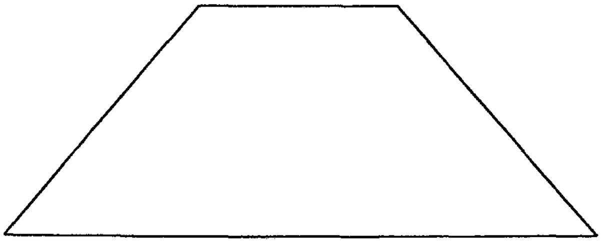
DESCRIPTION

SEEPAGE	water ponding (rain fall ?)
SLIP/ CRACK	
SETTLEMENT	
EROSION	OLD Brick wall
VEGETATION	

SKETCH

Remarks:

PLAN



CROSS-SECTION

SIDE

PHOTO REFERENCE
Roll No. ________________ **Frame No.** ________

SEEPAGE	SLIP/CRACK	SETTLEMENT	EROSION	VEGETATION
0 = None	0 = None	0 = <10mm	0 = None	0 = Concrete/Paved
1 = Wet Spot	1 = Shallow slip <2m	1 = Hummocky/Undulated	1 = Rill	1 = Bare
2 = Spring	2 = Deep seated slip >2m	2 = Sagged	2 = Gully	2 = Grass, scrubb
3 = Artesian/Boil	3 = Tension crack	3 = Sink hole/caving	3 = Sheet/channel	3 = Tree
4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify

PROJECT NO. 973017NB

FIELD RECONNAISSANCE

SITE LOCATION

APPROX. STATION: 7+000 SPRR **~~WEST~~ / EAST* LEVEE**

INBOARD / ~~OUTBOARD/ CREST*~~

*** Delete as appropriate**

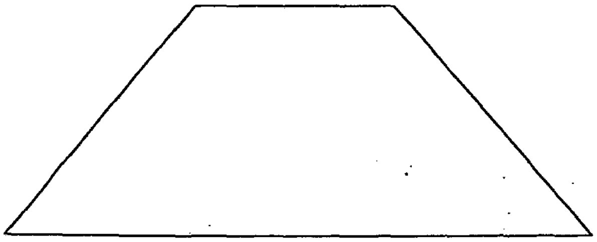
DESCRIPTION OLD STOCK PILE OF CONCRETE DEBRIS

SEEPAGE	
SLIP/ CRACK	
SETTLEMENT	
EROSION	
VEGETATION	

SKETCH

PLAN

Remarks:



CROSS-SECTION

SIDE

PHOTO REFERENCE
Roll No. ________ **Frame No.** ________

SEEPAGE	SLIP/CRACK	SETTLEMENT	EROSION	VEGETATION
0 = None	0 = None	0 = <10mm	0 = None	0 = Concrete/Paved
1 = Wet Spot	1 = Shallow slip <2m	1 = Hummocky/Undulated	1 = Rill	1 = Bare
2 = Spring	2 = Deep seated slip >2m	2 = Sagged	2 = Gully	2 = Grass, scrubb
3 = Artesian/Boil	3 = Tension crack	3 = Sink hole/caving	3 = Sheet/channel	3 = Tree
4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify

SITE LOCATION

PROJECT NO. 973017NB

FIELD RECONNAISSANCE

APPROX. STATION: 7+700 ~ 20 m ~~WEST~~ / **EAST* LEVEE**

INBOARD / ~~OUTBOARD/ CREST*~~

*** Delete as appropriate**

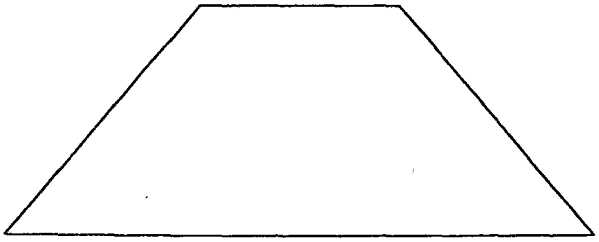
DESCRIPTION

SEEPAGE	wet spot at near toe,
SLIP/ CRACK	
SETTLEMENT	
EROSION	sheet erossion, rill.
VEGETATION	

SKETCH

Remarks:

PLAN



CROSS-SECTION

SIDE

PHOTO REFERENCE

Roll No. Hung's **Frame No.** 1

SEEPAGE	SLIP/CRACK	SETTLEMENT	EROSION	VEGETATION
0 = None	0 = None	0 = <10mm	0 = None	0 = Concrete/Paved
1 = Wet Spot	1 = Shallow slip <2m	1 = Hummocky/Undulated	1 = Rill	1 = Bare
2 = Spring	2 = Deep seated slip >2m	2 = Sagged	2 = Gully	2 = Grass, scrubb
3 = Artesian/Boil	3 = Tension crack	3 = Sink hole/caving	3 = Sheet/channel	3 = Tree
4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify

SITE LOCATION

PROJECT NO. 973017NB

FIELD RECONNAISSANCE

APPROX. STATION: 8+100 **~~WEST~~ / EAST* LEVEE**

~~INBOARD~~ / OUTBOARD/ CREST*

*** Delete as appropriate**

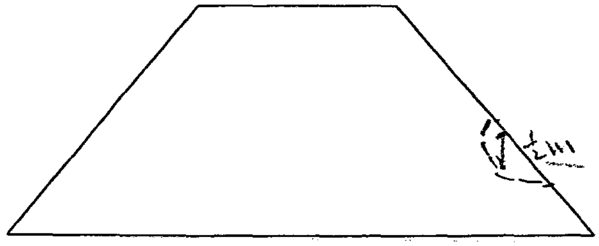
DESCRIPTION

SEEPAGE	
SLIP/ CRACK	
SETTLE-MENT	
EROSION	
VEGETA-TION	

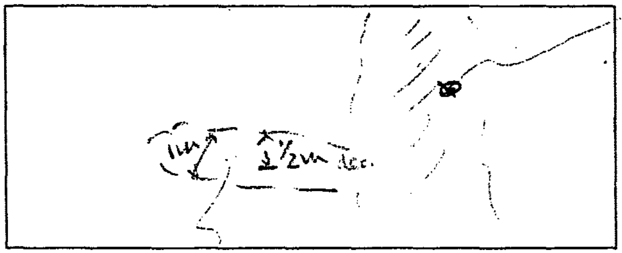
SKETCH

Remarks:

PLAN



CROSS-SECTION



dist— filled ripped erosion mat

EXCAVATED ??

SIDE

PHOTO REFERENCE
Roll No. ____________ **Frame No.** ________

SEEPAGE	SLIP/CRACK	SETTLEMENT	EROSION	VEGETATION
0 = None	0 = None	0 = <10mm	0 = None	0 = Concrete/Paved
1 = Wet Spot	1 = Shallow slip <2m	1 = Hummocky/Undulated	1 = Rill	1 = Bare
2 = Spring	2 = Deep seated slip >2m	2 = Sagged	2 = Gully	2 = Grass, scrubb
3 = Artesian/Boil	3 = Tension crack	3 = Sink hole/caving	3 = Sheet/channel	3 = Tree
4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify

SITE LOCATION

PROJECT NO. 973017NB

FIELD RECONNAISSANCE

APPROX. STATION: 9+150 ~ 8+700 ~~WEST~~/ EAST* LEVEE

~~INBOARD~~ / OUTBOARD/ ~~CREST*~~

* Delete as appropriate   + Disposed excavation material abutting outboard slope of levee

DESCRIPTION @ 8+850

SEEPAGE	
SLIP/ CRACK	UNDERCUT TOE AND STOCKPILED WITH LOOSE EXCAVATED MATERIAL (see sketch)
SETTLE- MENT	
EROSION	
VEGETA- TION	

SKETCH

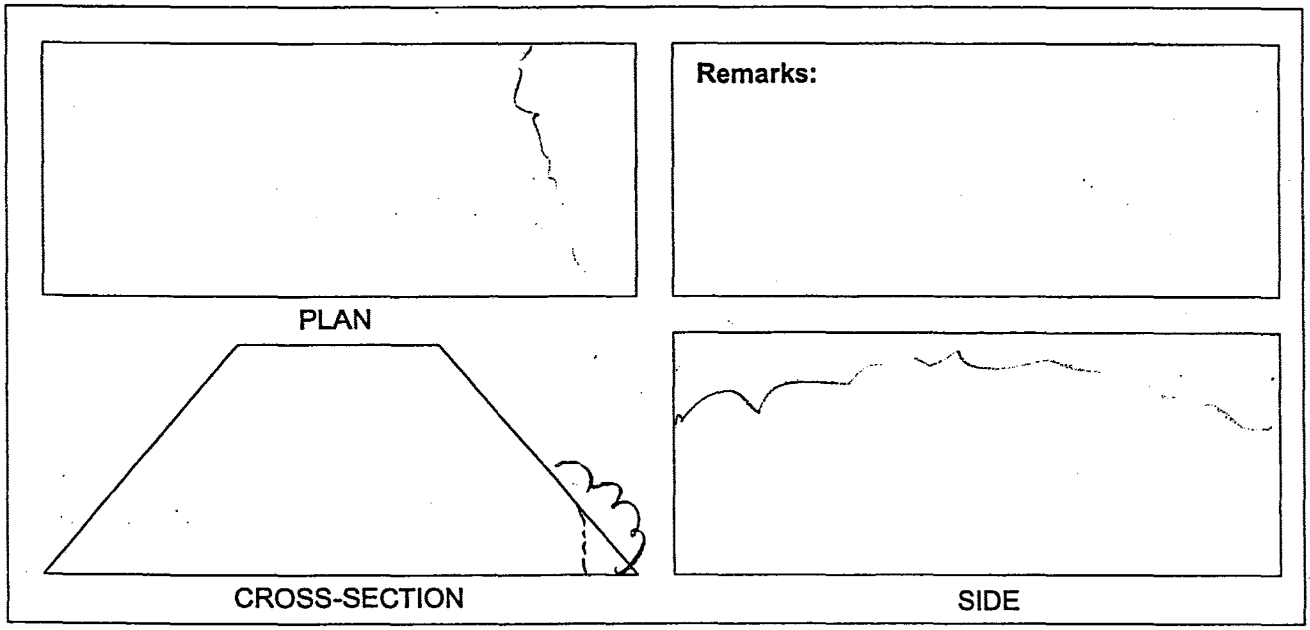


PHOTO REFERENCE
Roll No. ________ Frame No. ________

SEEPAGE	SLIP/CRACK	SETTLEMENT	EROSION	VEGETATION
0 = None	0 = None	0 = <10mm	0 = None	0 = Concrete/Paved
1 = Wet Spot	1 = Shallow slip <2m	1 = Hummocky/Undulated	1 = Rill	1 = Bare
2 = Spring	2 = Deep seated slip >2m	2 = Sagged	2 = Gully	2 = Grass, scrubb
3 = Artesian/Boil	3 = Tension crack	3 = Sink hole/caving	3 = Sheet/channel	3 = Tree
4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify

SITE LOCATION

PROJECT NO. 973017NB

FIELD RECONNAISSANCE

APPROX. STATION: 9 + 200 **~~WEST~~ / EAST* LEVEE**

~~INBOARD~~/ ~~OUTBOARD~~/ CREST* TASMAN DR.

*** Delete as appropriate**

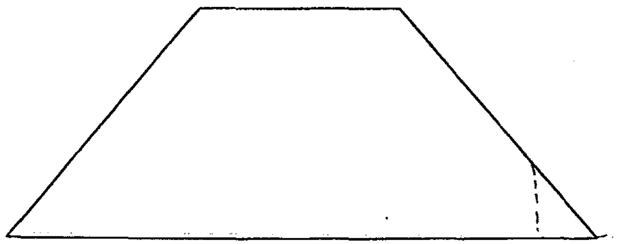
DESCRIPTION

SEEPAGE	
SLIP/ CRACK	
SETTLE-MENT	
EROSION	
VEGETA-TION	

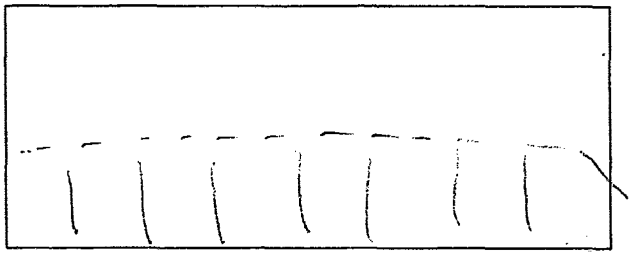
SKETCH

PLAN

Remarks:



CROSS-SECTION



SIDE

OVER EXCAVATED FOR THE PIPE CROSSING

PHOTO REFERENCE
Roll No. ________________ **Frame No.** ________

SEEPAGE	SLIP/CRACK	SETTLEMENT	EROSION	VEGETATION
0 = None	0 = None	0 = <10mm	0 = None	0 = Concrete/Paved
1 = Wet Spot	1 = Shallow slip <2m	1 = Hummocky/Undulated	1 = Rill	1 = Bare
2 = Spring	2 = Deep seated slip >2m	2 = Sagged	2 = Gully	2 = Grass, scrubb
3 = Artesian/Boil	3 = Tension crack	3 = Sink hole/caving	3 = Sheet/channel	3 = Tree
4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify

SITE LOCATION

PROJECT NO. 973017NB

FIELD RECONNAISSANCE

APPROX. STATION: 9+850 **~~WEST~~ / EAST* LEVEE**

~~INBOARD~~ / OUTBOARD/ CREST*

*** Delete as appropriate**

DESCRIPTION

SEEPAGE	
SLIP/ CRACK	Bu Undermine wall
SETTLE-MENT	
EROSION	
VEGETA-TION	

SKETCH

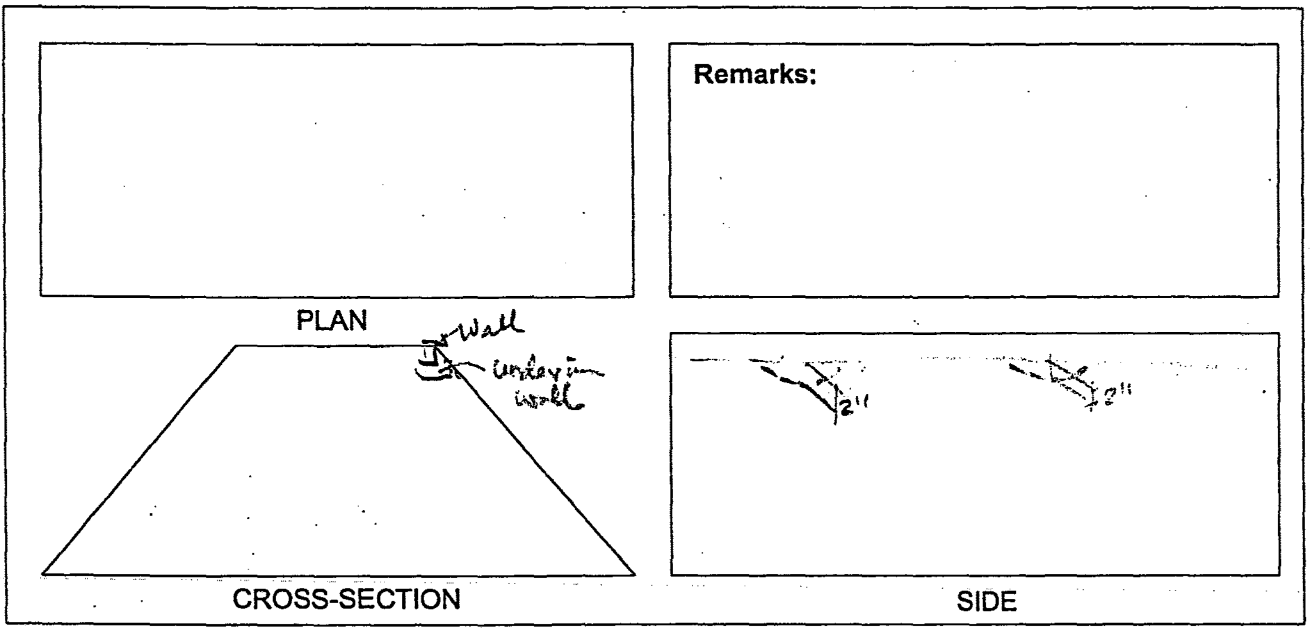


PHOTO REFERENCE
Roll No. ________________ **Frame No.** ________

SEEPAGE	SLIP/CRACK	SETTLEMENT	EROSION	VEGETATION
0 = None	0 = None	0 = <10mm	0 = None	0 = Concrete/Paved
1 = Wet Spot	1 = Shallow slip <2m	1 = Hummocky/Undulated	1 = Rill	1 = Bare
2 = Spring	2 = Deep seated slip >2m	2 = Sagged	2 = Gully	2 = Grass, scrubb
3 = Artesian/Boil	3 = Tension crack	3 = Sink hole/caving	3 = Sheet/channel	3 = Tree
4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify

Bu = Animal Barrow

PROJECT NO. 973017NB

FIELD RECONNAISSANCE

SITE LOCATION

APPROX. STATION: 9+980 **~~WEST~~ / EAST* LEVEE**

INBOARD / ~~OUTBOARD/ CREST~~*

*** Delete as appropriate**

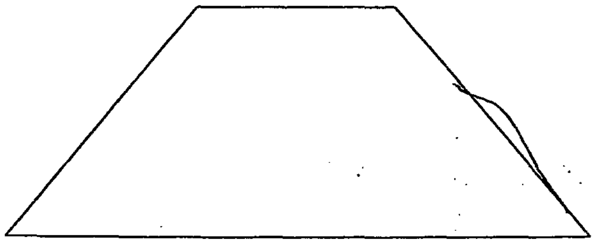
DESCRIPTION

SEEPAGE	
SLIP/ CRACK	Old slip
SETTLE-MENT	
EROSION	
VEGETA-TION	

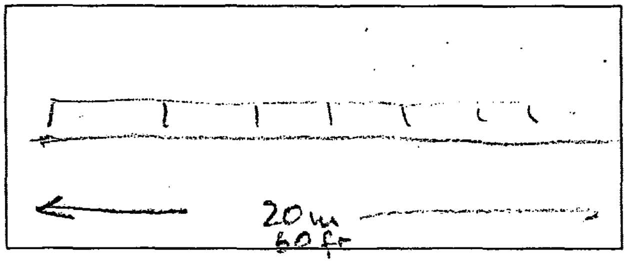
SKETCH

Remarks:

PLAN



CROSS-SECTION



SIDE

PHOTO REFERENCE
Roll No. ________________ **Frame No.** ________

SEEPAGE	SLIP/CRACK	SETTLEMENT	EROSION	VEGETATION
0 = None	0 = None	0 = <10mm	0 = None	0 = Concrete/Paved
1 = Wet Spot	1 = Shallow slip <2m	1 = Hummocky/Undulated	1 = Rill	1 = Bare
2 = Spring	2 = Deep seated slip >2m	2 = Sagged	2 = Gully	2 = Grass, scrubb
3 = Artesian/Boil	3 = Tension crack	3 = Sink hole/caving	3 = Sheet/channel	3 = Tree
4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify

DATE: 12/19/97 TIME: ____________

PROJECT NO. 973017NB

WEATHER: Sunny

FIELD RECONNAISSANCE

RECORDED BY SH

EAST / ~~WEST~~ LEVEE

FIELD CREW: ML, NM, DG (SCVWD

SEEPAGE				Bu		
SLIP/ CRACK		Start of Project				
SETTLE-MENT						
EROSION						
VEGETA-TION		④ AA				
REF. LOC.		Marina Parking Lot		("Gross" Building		
	0+050	0+100	0+150	0+200	0+250	0+300
		2		3		4

Plan View from Station 6+100 **to** 6+400 **Reference Location:** ____________

SEEPAGE					Bu	
SLIP/ CRACK					Slope steepened at toe 1 to 1 ~ 1½ to 1	
SETTLE-MENT				100'x15' old concrete berth. unsorted debris		
EROSION						Concrete + retaining wall: 'trash' on slope
VEGETA-TION		②	①~② →	→	② →	
REF. LOC.		Steam Boat Slough				
	0+050	0+100	0+150	0+200	0+250	0+300

In-board View from Station 6+100 **to** 6+400 **Reference Location:** ____________

SEEPAGE			Brick Wall at toe			Bu cluster
SLIP/ CRACK		Concrete Staircase; No apparent sign of distress		Reinforced Earth Wall No sign of distress		
SETTLE-MENT						
EROSION						
VEGETA-TION		①	③	② →	→	→
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

Out-board View from Station 6+100 **to** 6+400 **Reference Location:** ____________

SEEPAGE	SLIP/CRACK	SETTLEMENT	EROSION	VEGETATION
0 = None	0 = None	0 = None	0 = None	0 = Concrete/Paved
1 = Wet Spot	1 = Shallow slip <2m	1 = Hummocky/Undulated	1 = Rill	1 = Bare to short grass
2 = Spring	2 = Deep seated slip >2m	2 = Sagged	2 = Gully	2 = Scrubb, brush
3 = Artesian/Boil	3 = Tension crack	3 = Sink hole/caving	3 = Sheet/channel	3 = Tree
4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify

Bu = Animal Burrow

AA = Armor aggregate

DATE: 12/19/97 TIME: ____________

PROJECT NO. 973017NB

WEATHER: SUNNY

FIELD RECONNAISSANCE

RECORDED BY SH

EAST / ~~WEST L~~EVEE FIELD CREW : ML, N,M . DG (scun

SEEPAGE						
SLIP/ CRACK						
SETTLE-MENT			② Sagged on outboard edge			
EROSION						
VEGETA-TION	④ A1					
REF. LOC.		5				
	0+050	0+100	0+150	0+200 6	0+250	0+300 7

Plan View from Station 6+400 **to** 6+700 **Reference Location:** ____________

SEEPAGE	① Bu	Wet at toe, high flow	Bu		Bu	Bu
SLIP/ CRACK						
SETTLE-MENT						
EROSION	①		③			
VEGETA-TION	② →	→	→	→	→	→
REF. LOC.	↥ Harbor Gate					
	0+050	0+100	0+150	0+200	0+250	0+300

In-board View from Station 6+400 **to** 6+700 **Reference Location:** ____________

SEEPAGE	Bu		Bu			Bu cluster
SLIP/ CRACK						
SETTLE-MENT						
EROSION						
VEGETA-TION	① to ② →	→	→	→	→	→
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

Out-board View from Station 6+400 **to** 6+700 **Reference Location:** ____________

SEEPAGE	SLIP/CRACK	SETTLEMENT	EROSION	VEGETATION
0 = None	0 = None	0 = None	0 = None	0 = Concrete/Paved
1 = Wet Spot	1 = Shallow slip <2m	1 = Hummocky/Undulated	1 = Rill	1 = Bare to short grass
2 = Spring	2 = Deep seated slip >2m	2 = Sagged	2 = Gully	2 = Scrubb, brush
3 = Artesian/Boil	3 = Tension crack	3 = Sink hole/caving	3 = Sheet/channel	3 = Tree
4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify

DATE: 12/19/97 TIME: ____________ **PROJECT NO. 973017NB**

WEATHER: SUNNY, COOL

FIELD RECONNAISSANCE

RECORDED BY SH

EAST / ~~WEST~~ LEVEE Field Crew: ML, NM, DG (SCVWD)

SEEPAGE						
SLIP/ CRACK						
SETTLE-MENT						
EROSION						
VEGETA-TION	④ 4A					
REF. LOC.						UPRR
	0+050	0+100 8	0+150	0+200 9	0+250	0+300

Plan View from Station 6+700 **to** 7+000 **Reference Location:** ____________

SEEPAGE						
SLIP/ CRACK						
SETTLE-MENT						
EROSION						
VEGETA-TION	② ⟶	⟶	⟶	⟶	⟶	⟶
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

In-board View from Station 6+700 **to** 7+000 **Reference Location:** ____________

SEEPAGE						
SLIP/ CRACK						
SETTLE-MENT						
EROSION						
VEGETA-TION	① ⟶	⟶	⟶	⟶	⟶	⟶
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

Out-board View from Station 6+700 **to** 7+000 **Reference Location:** ____________

SEEPAGE	SLIP/CRACK	SETTLEMENT	EROSION	VEGETATION
0 = None	0 = None	0 = None	0 = None	0 = Concrete/Paved
1 = Wet Spot	1 = Shallow slip <2m	1 = Hummocky/Undulated	1 = Rill	1 = Bare to short grass
2 = Spring	2 = Deep seated slip >2m	2 = Sagged	2 = Gully	2 = Scrubb, brush
3 = Artesian/Boil	3 = Tension crack	3 = Sink hole/caving	3 = Sheet/channel	3 = Tree
4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify

DATE: 12/19/97 TIME: ____________ **PROJECT NO. 973017NB**

WEATHER: SUNNY, COOL

FIELD RECONNAISSANCE

RECORDED BY SH

EAST / ~~WEST~~ LEVEE FIELD CREW: ML, NM, DG(scuw

SEEPAGE						
SLIP/ CRACK				Cracks		
SETTLE-MENT				↔ slightly depressed on edge		
EROSION						
VEGETA-TION						
REF. LOC.	UPRR TRACK		GOLD STREET		Sump Pump for City runoff	Transmission Tower
	0+050	0+100	0+150	0+200	0+250	0+300

Plan View from Station 7+000 **to** 7+300 **Reference Location:** ____________

SEEPAGE	Bu	Bu (6"Ø)		Bu		Bu
SLIP/ CRACK						
SETTLE-MENT						
EROSION						
VEGETA-TION	①	② →	→	→	→	→
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

In-board View from Station 7+000 **to** 7+300 **Reference Location:** ____________

SEEPAGE		Bu (6"Ø)				
SLIP/ CRACK						
SETTLE-MENT						
EROSION						
VEGETA-TION	①		②	②		
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

Out-board View from Station 7+000 **to** 7+300 **Reference Location:** ____________

SEEPAGE	SLIP/CRACK	SETTLEMENT	EROSION	VEGETATION
0 = None	0 = None	0 = None	0 = None	0 = Concrete/Paved
1 = Wet Spot	1 = Shallow slip <2m	1 = Hummocky/Undulated	1 = Rill	1 = Bare to short grass
2 = Spring	2 = Deep seated slip >2m	2 = Sagged	2 = Gully	2 = Scrubb, brush
3 = Artesian/Boil	3 = Tension crack	3 = Sink hole/caving	3 = Sheet/channel	3 = Tree
4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify

DATE: 12/19/97 TIME: ____________

WEATHER: SUNNY

RECORDED BY SH

EAST / ~~WEST~~ LEVEE FIELD CREW: ML, NM, DG (SCRWD)

PROJECT NO. 973017NB

FIELD RECONNAISSANCE

SEEPAGE						
SLIP/ CRACK						
SETTLE-MENT						
EROSION						
VEGETA-TION	④ AA					
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

Plan View from Station 7+300 **to** 7+600 **Reference Location:** ____________

SEEPAGE			Bu	3u		① @ toe
SLIP/ CRACK						
SETTLE-MENT						
EROSION						
VEGETA-TION	② →	→	→	Willow tree ↓ →	→	① Bare spot ② →
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

In-board View from Station 7+300 **to** 7+600 **Reference Location:** ____________

SEEPAGE						
SLIP/ CRACK						
SETTLE-MENT						
EROSION						
VEGETA-TION	② →	→	→	→	→	→
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

Out-board View from Station 7+300 **to** 7+600 **Reference Location:** ____________

SEEPAGE	SLIP/CRACK	SETTLEMENT	EROSION	VEGETATION
0 = None	0 = None	0 = None	0 = None	0 = Concrete/Paved
1 = Wet Spot	1 = Shallow slip <2m	1 = Hummocky/Undulated	1 = Rill	1 = Bare to short grass
2 = Spring	2 = Deep seated slip >2m	2 = Sagged	2 = Gully	2 = Scrubb, brush
3 = Artesian/Boil	3 = Tension crack	3 = Sink hole/caving	3 = Sheet/channel	3 = Tree
4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify

DATE: 12/19/97 TIME: ____________

PROJECT NO. 973017NB

WEATHER: SUNNY

FIELD RECONNAISSANCE

RECORDED BY SH

EAST / ~~WEST~~ LEVEE Field Crew : ML , D , DG (SCVWD)

	0+050	0+100	0+150	0+200	0+250	0+300
SEEPAGE						
SLIP/ CRACK						
SETTLE-MENT						
EROSION						
VEGETA-TION	④ AA					
REF. LOC.	Golf Practice Range					

Plan View from Station 7+600 to 7+900 Reference Location: ____________

	0+050	0+100	0+150	0+200	0+250	0+300
SEEPAGE		① @ toe ⟷				Bu
SLIP/ CRACK						
SETTLE-MENT						
EROSION		③ at toe ⟷			① @ toe ×	
VEGETA-TION	② →					
REF. LOC.						

In-board View from Station 7+600 to 7+900 Reference Location: ____________

	0+050	0+100	0+150	0+200	0+250	0+300
SEEPAGE		Bu Toe ditch, dry	Bu			
SLIP/ CRACK						
SETTLE-MENT						
EROSION						
VEGETA-TION	② →					
REF. LOC.						

Out-board View from Station 7+600 to 7+900 Reference Location: ____________

SEEPAGE
0 = None
1 = Wet Spot
2 = Spring
3 = Artesian/Boil
4 = Other; specify

SLIP/CRACK
0 = None
1 = Shallow slip <2m
2 = Deep seated slip >2m
3 = Tension crack
4 = Other; specify

SETTLEMENT
0 = None
1 = Hummocky/Undulated
2 = Sagged
3 = Sink hole/caving
4 = Other; specify

EROSION
0 = None
1 = Rill
2 = Gully
3 = Sheet/channel
4 = Other; specify

VEGETATION
0 = Concrete/Paved
1 = Bare to short grass
2 = Scrubb, brush
3 = Tree
4 = Other; specify

DATE: 12/19/97 **TIME:** ______________

PROJECT NO. 973017NB

WEATHER: Sunny

FIELD RECONNAISSANCE

RECORDED BY SH

EAST / ~~WEST~~ LEVEE Field Crew: ML, NM, DG (SCVWD)

SEEPAGE						
SLIP/ CRACK						
SETTLE-MENT						
EROSION						
VEGETA-TION	④ AA					
REF. LOC.			Hwy 237			
	0+050	0+100	0+150	0+200	0+250	0+300

Plan View from Station 7+900 **to** 8+200 **Reference Location:** ______________

SEEPAGE						Bu cluster.
SLIP/ CRACK						
SETTLE-MENT						
EROSION			Loose fill under bridges			
VEGETA-TION	② →	→	①	← ② →	→	→
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

In-board View from Station 7+900 **to** 8+200 **Reference Location:** ______________

SEEPAGE						Bu cluster
SLIP/ CRACK				Cut on slope; see detail *		
SETTLE-MENT						
EROSION						
VEGETA-TION	② →	→		① + ② →	→	→
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

Out-board View from Station 7+900 **to** 8+200 **Reference Location:** ______________

SEEPAGE	SLIP/CRACK	SETTLEMENT	EROSION	VEGETATION
0 = None	0 = None	0 = None	0 = None	0 = Concrete/Paved
1 = Wet Spot	1 = Shallow slip <2m	1 = Hummocky/Undulated	1 = Rill	1 = Bare to short grass
2 = Spring	2 = Deep seated slip >2m	2 = Sagged	2 = Gully	2 = Scrubb, brush
3 = Artesian/Boil	3 = Tension crack	3 = Sink hole/caving	3 = Sheet/channel	3 = Tree
4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify

DATE: 12/19/97 TIME: ____________

PROJECT NO. 973017NB

WEATHER: SUNNY

FIELD RECONNAISSANCE

RECORDED BY SH

EAST / ~~WEST~~ LEVEE FIELD CREW: ML, NM, DG (SCVWD)

SEEPAGE						
SLIP/ CRACK						
SETTLE-MENT						
EROSION						
VEGETA-TION	④ AA					
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

Plan View from Station 8+200 **to** 8+500 **Reference Location:** ____________

SEEPAGE				⊗ ⊗ twin 18" pipe (dry)	⊗ outfall pipe	
SLIP/ CRACK						
SETTLE-MENT					⊗ pot hole	
EROSION						
VEGETA-TION	② →					→
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

In-board View from Station 8+200 **to** 8+500 **Reference Location:** ____________

SEEPAGE	① @ toe Bu	← ① → @ toe	→	→		
SLIP/ CRACK						
SETTLE-MENT						
EROSION						
VEGETA-TION	① →					→
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

Out-board View from Station 8+200 **to** 8+500 **Reference Location:** ____________

SEEPAGE	SLIP/CRACK	SETTLEMENT	EROSION	VEGETATION
0 = None	0 = None	0 = None	0 = None	0 = Concrete/Paved
1 = Wet Spot	1 = Shallow slip <2m	1 = Hummocky/Undulated	1 = Rill	1 = Bare to short grass
2 = Spring	2 = Deep seated slip >2m	2 = Sagged	2 = Gully	2 = Scrubb, brush
3 = Artesian/Boil	3 = Tension crack	3 = Sink hole/caving	3 = Sheet/channel	3 = Tree
4 = Other, specify	4 = Other; specify	4 = Other, specify	4 = Other; specify	4 = Other; specify

DATE: 12/19/97 TIME: ______ PROJECT NO. 973017NB

WEATHER: SUNNY

FIELD RECONNAISSANCE

RECORDED BY SH

EAST ~~/WEST~~ LEVEE FIELD CREW: ML, NM, DG (SCVWD)

SEEPAGE						
SLIP/ CRACK						
SETTLE- MENT						
EROSION						
VEGETA- TION	④ 4A					
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

Plan View from Station 8+500 to 8+800 Reference Location: ______

SEEPAGE			Scattered	Bu		
SLIP/ CRACK						
SETTLE- MENT						
EROSION						
VEGETA- TION	②					
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

In-board View from Station 8+500 to 8+800 Reference Location: ______

SEEPAGE			Scattered	Bu		
SLIP/ CRACK					Stockpile excavated material from adjacent development; 1/2m cut @ toe in some areas	
SETTLE- MENT						
EROSION		Damaged/Torn erosion mat reportedly by bikers				
VEGETA- TION	①					
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

Out-board View from Station 8+500 to 8+800 Reference Location: ______

SEEPAGE	SLIP/CRACK	SETTLEMENT	EROSION	VEGETATION
0 = None	0 = None	0 = None	0 = None	0 = Concrete/Paved
1 = Wet Spot	1 = Shallow slip <2m	1 = Hummocky/Undulated	1 = Rill	1 = Bare to short grass
2 = Spring	2 = Deep seated slip >2m	2 = Sagged	2 = Gully	2 = Scrubb, brush
3 = Artesian/Boil	3 = Tension crack	3 = Sink hole/caving	3 = Sheet/channel	3 = Tree
4 = Other, specify	4 = Other, specify	4 = Other, specify	4 = Other, specify	4 = Other, specify

DATE: 12/19/97 TIME:

PROJECT NO. 973017NB

WEATHER: SUNNY

FIELD RECONNAISSANCE

RECORDED BY SH

EAST / ~~WEST~~ LEVEE FIELD CREW: ML, NM, DG (SCVWD)

SEEPAGE						
SLIP/ CRACK						
SETTLE-MENT						
EROSION						
VEGETA-TION						
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

Plan View from Station 8+800 **to** 9+100 **Reference Location:**

SEEPAGE	Scattered Bu					
SLIP/ CRACK						
SETTLE-MENT						
EROSION						
VEGETA-TION	②					
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

In-board View from Station 8+800 **to** 9+100 **Reference Location:**

SEEPAGE	Scattered Bu					
SLIP/ CRACK	stockpiled excavated material from adjacent development; ½ m cut at toe at some areas					
SETTLE-MENT						
EROSION			① Minor			
VEGETA-TION						
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

Out-board View from Station 8+800 **to** 9+100 **Reference Location:**

SEEPAGE	SLIP/CRACK	SETTLEMENT	EROSION	VEGETATION
0 = None	0 = None	0 = None	0 = None	0 = Concrete/Paved
1 = Wet Spot	1 = Shallow slip <2m	1 = Hummocky/Undulated	1 = Rill	1 = Bare to short grass
2 = Spring	2 = Deep seated slip >2m	2 = Sagged	2 = Gully	2 = Scrubb, brush
3 = Artesian/Boil	3 = Tension crack	3 = Sink hole/caving	3 = Sheet/channel	3 = Tree
4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify

DATE: 12/22/97 TIME: ____________

PROJECT NO. 973017NB

WEATHER: SUNNY, WINDY

FIELD RECONNAISSANCE

RECORDED BY SH

EAST / ~~WEST~~ LEVEE FIELD CREW: ML, D , DG (SCVWD)

SEEPAGE						
SLIP/ CRACK						
SETTLE-MENT						
EROSION						
VEGETA-TION						
REF. LOC.			Tasman Drive			
	0+050	0+100	0+150	0+200	0+250	0+300

Plan View from Station 9+100 **to** 9+400 **Reference Location:** ____________

SEEPAGE	← Scattered Bu	Bu →			Bu	
SLIP/ CRACK						
SETTLE-MENT						
EROSION						
VEGETA-TION	②					
REF. LOC.			Tasman Drive			
	0+050	0+100	0+150	0+200	0+250	0+300

In-board View from Station 9+100 **to** 9+400 **Reference Location:** ____________

SEEPAGE	← Scattered Bu	→			Bu cluster	
SLIP/ CRACK	Stockpile material from adjacent development		Excavation for pipe installation; undermined slope toe to 1± m			
SETTLE-MENT						
EROSION						
VEGETA-TION	②			①; Landscaped at toe		→
REF. LOC.			Tasman Drive			
	0+050	0+100	0+150	0+200	0+250	0+300

Out-board View from Station 9+100 **to** 9+400 **Reference Location:** ____________

SEEPAGE	SLIP/CRACK	SETTLEMENT	EROSION	VEGETATION
0 = None	0 = None	0 = None	0 = None	0 = Concrete/Paved
1 = Wet Spot	1 = Shallow slip <2m	1 = Hummocky/Undulated	1 = Rill	1 = Bare to short grass
2 = Spring	2 = Deep seated slip >2m	2 = Sagged	2 = Gully	2 = Scrubb, brush
3 = Artesian/Boil	3 = Tension crack	3 = Sink hole/caving	3 = Sheet/channel	3 = Tree
4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify

DATE: 12/22/97 TIME: ______

PROJECT NO. 973017NB

WEATHER: SUNNY, WINDY

FIELD RECONNAISSANCE

RECORDED BY SH

EAST / ~~WEST~~ LEVEE FIELD CREW: ML, DA, DG (SCVWD)

SEEPAGE			Bu			
SLIP/ CRACK						
SETTLE-MENT						
EROSION				Fill at interface of "L" wall and levee fill (beginning of wall) eroded by foot traffic		
VEGETA-TION						
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

Plan View from Station 9+400 **to** 9+700 **Reference Location:** ______

SEEPAGE		Bu	Bu Bu cluster			
SLIP/ CRACK						+720 1/2 m cut @ toe
SETTLE-MENT						
EROSION			① @ top slope near crest			② @ toe
VEGETA-TION	①					
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

In-board View from Station 9+400 **to** 9+700 **Reference Location:** ______

SEEPAGE		Bu	Bu undermine "L" wall			① @ toe
SLIP/ CRACK						
SETTLE-MENT	Soft	* Soft, moist @ toe area				
EROSION	damaged erosion control mat					
VEGETA-TION	① landscaped at toe					Old irrigation lines
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

Out-board View from Station 9+400 **to** 9+700 **Reference Location:** ______

* Possible borehole location

SEEPAGE	SLIP/CRACK	SETTLEMENT	EROSION	VEGETATION
0 = None	0 = None	0 = None	0 = None	0 = Concrete/Paved
1 = Wet Spot	1 = Shallow slip <2m	1 = Hummocky/Undulated	1 = Rill	1 = Bare to short grass
2 = Spring	2 = Deep seated slip >2m	2 = Sagged	2 = Gully	2 = Scrubb, brush
3 = Artesian/Boil	3 = Tension crack	3 = Sink hole/caving	3 = Sheet/channel	3 = Tree
4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify

DATE: 12/22/97 TIME: ____________

PROJECT NO. 973017NB

WEATHER: Sunny, Windy

FIELD RECONNAISSANCE

RECORDED BY SH

EAST / ~~WEST~~ LEVEE Field Crew: ML, D, DG (SCVWD)

SEEPAGE						
SLIP/ CRACK						
SETTLE-MENT						
EROSION						
VEGETA-TION						
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

Plan View from Station 9+700 to 10+000 Reference Location: ____________

SEEPAGE		Bu ▼				
SLIP/ CRACK						↔ ① @ toe
SETTLE-MENT						
EROSION		② related to Bu				
VEGETA-TION	① to ② →					
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

In-board View from Station 9+700 to 10+000 Reference Location: ____________

SEEPAGE		Bu ▼		▼▼ Bu, undermined "L" flood wall		
SLIP/ CRACK						
SETTLE-MENT						
EROSION		① related to Bu				
VEGETA-TION	①, Landscaped at toe →					
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

Out-board View from Station 9+700 to 10+000 Reference Location: ____________

SEEPAGE	SLIP/CRACK	SETTLEMENT	EROSION	VEGETATION
0 = None	0 = None	0 = None	0 = None	0 = Concrete/Paved
1 = Wet Spot	1 = Shallow slip <2m	1 = Hummocky/Undulated	1 = Rill	1 = Bare to short grass
2 = Spring	2 = Deep seated slip >2m	2 = Sagged	2 = Gully	2 = Scrubb, brush
3 = Artesian/Boil	3 = Tension crack	3 = Sink hole/caving	3 = Sheet/channel	3 = Tree
4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify

DATE: 12/22/97 TIME: ______________

PROJECT NO. 973017NB

WEATHER: SUNNY, WINDY

FIELD RECONNAISSANCE

RECORDED BY SH

EAST / ~~WEST~~ LEVEE

SEEPAGE						
SLIP/ CRACK			Slight separation at wall and fill interface			
SETTLE- MENT						
EROSION						
VEGETA- TION						
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

Plan View from Station 10+000 to 10+300 Reference Location: ______________

SEEPAGE	Bu cluster	Bu trail @ toe	Bu cluster			Bu cluster
SLIP/ CRACK						½m cut @ toe
SETTLE- MENT						
EROSION			③			
VEGETA- TION	② →					
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

In-board View from Station 10+000 to 10+300 Reference Location: ______________

SEEPAGE	Bu cluster ←					
SLIP/ CRACK						
SETTLE- MENT						
EROSION						Surface erosion 4' strip
VEGETA- TION	① landscaped at toe →					
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

Out-board View from Station 10+00 to 10+300 Reference Location: ______________

SEEPAGE	SLIP/CRACK	SETTLEMENT	EROSION	VEGETATION
0 = None	0 = None	0 = None	0 = None	0 = Concrete/Paved
1 = Wet Spot	1 = Shallow slip <2m	1 = Hummocky/Undulated	1 = Rill	1 = Bare to short grass
2 = Spring	2 = Deep seated slip >2m	2 = Sagged	2 = Gully	2 = Scrubb, brush
3 = Artesian/Boil	3 = Tension crack	3 = Sink hole/caving	3 = Sheet/channel	3 = Tree
4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify

DATE: 12/22/97 TIME: ____________

PROJECT NO. 973017NB

WEATHER: SUNNY, WINDY

FIELD RECONNAISSANCE

RECORDED BY SH

EAST / ~~WEST~~ LEVEE FIELD CREW: ML, D , DG (SCVWD)

SEEPAGE						
SLIP/ CRACK						
SETTLE-MENT						
EROSION						
VEGETA-TION						
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

Plan View from Station 10+300 **to** 10+600 **Reference Location:** ____________

SEEPAGE	Bu cluster ▼	Bu ▼ became large hole on slope	Bu ▼			
SLIP/ CRACK						
SETTLE-MENT						
EROSION	③ ├┤					
VEGETA-TION	② ———	———	———	———	———	———▷
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

In-board View from Station 10+300 **to** 10+600 **Reference Location:** ____________

SEEPAGE			Bu cluster ▼	Bu ▼		
SLIP/ CRACK						
SETTLE-MENT						
EROSION						
VEGETA-TION	①, landscaped at toe	———	———	———	———	———▷
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

Out-board View from Station 10+300 **to** 10+600 **Reference Location:** ____________

SEEPAGE	SLIP/CRACK	SETTLEMENT	EROSION	VEGETATION
0 = None	0 = None	0 = None	0 = None	0 = Concrete/Paved
1 = Wet Spot	1 = Shallow slip <2m	1 = Hummocky/Undulated	1 = Rill	1 = Bare to short grass
2 = Spring	2 = Deep seated slip >2m	2 = Sagged	2 = Gully	2 = Scrubb, brush
3 = Artesian/Boil	3 = Tension crack	3 = Sink hole/caving	3 = Sheet/channel	3 = Tree
4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify

DATE: 12/22/97 TIME:

PROJECT NO. 973017NB

WEATHER: SUNNY, WINDY

FIELD RECONNAISSANCE

RECORDED BY SH

EAST / ~~WEST~~ LEVEE FIELD CREW : ML, D , DG(SCVWD)

SEEPAGE						Bu ○ formed a hole
SLIP/ CRACK						
SETTLE-MENT						
EROSION						② related to Bu; developed near edge of levee
VEGETA-TION						
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

Plan View from Station 10+600 **to** 10+900 **Reference Location:**

SEEPAGE	Bu		⊗ 12" outfall; plugged		Bu	
SLIP/ CRACK	Slope changed; steeper @ toe	↤| old slip ① ▼ Old slip				
SETTLE-MENT						
EROSION						
VEGETA-TION	② →	→	→	→	→	→
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

In-board View from Station 10+600 **to** 10+900 **Reference Location:**

SEEPAGE			← Bu. cluster	←	←	←
SLIP/ CRACK						
SETTLE-MENT						
EROSION						
VEGETA-TION	①; landscaped at toe →	→				
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

Out-board View from Station 10+600 **to** 10+900 **Reference Location:**

SEEPAGE	SLIP/CRACK	SETTLEMENT	EROSION	VEGETATION
0 = None	0 = None	0 = None	0 = None	0 = Concrete/Paved
1 = Wet Spot	1 = Shallow slip <2m	1 = Hummocky/Undulated	1 = Rill	1 = Bare to short grass
2 = Spring	2 = Deep seated slip >2m	2 = Sagged	2 = Gully	2 = Scrubb, brush
3 = Artesian/Boil	3 = Tension crack	3 = Sink hole/caving	3 = Sheet/channel	3 = Tree
4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify

DATE: 12/22/97 **TIME:** ______________

PROJECT NO. 973017NB

FIELD RECONNAISSANCE

WEATHER: SUNNY, WINDY

RECORDED BY SH

EAST / ~~WEST~~ LEVEE FIELD CREW : ML, D , DG (SCUWD)

SEEPAGE						
SLIP/ CRACK						
SETTLE-MENT						
EROSION						
VEGETA-TION						
REF. LOC.						
	0+050	**0+100**	**0+150**	**0+200**	**0+250**	**0+300**

Plan View from Station 10+900 **to** 11+200 **Reference Location:** ______________

SEEPAGE		⊗ 36"	⊗ Well at toe			
SLIP/ CRACK						⟷ 2' undercut @ toe
SETTLE-MENT						
EROSION						③ ⟷ ② ⟶ @ toe
VEGETA-TION	② ⟶					
REF. LOC.						
	0+050	**0+100**	**0+150**	**0+200**	**0+250**	**0+300**

In-board View from Station 10+900 **to** 11+200 **Reference Location:** ______________

SEEPAGE	Bu (pile of loose soil 1'dia hole)					
SLIP/ CRACK						
SETTLE-MENT						
EROSION						
VEGETA-TION	① ⟶					
REF. LOC.						
	0+050	**0+100**	**0+150**	**0+200**	**0+250**	**0+300**

Out-board View from Station 10+900 **to** 11+200 **Reference Location:** ______________

SEEPAGE	SLIP/CRACK	SETTLEMENT	EROSION	VEGETATION
0 = None	0 = None	0 = None	0 = None	0 = Concrete/Paved
1 = Wet Spot	1 = Shallow slip <2m	1 = Hummocky/Undulated	1 = Rill	1 = Bare to short grass
2 = Spring	2 = Deep seated slip >2m	2 = Sagged	2 = Gully	2 = Scrubb, brush
3 = Artesian/Boil	3 = Tension crack	3 = Sink hole/caving	3 = Sheet/channel	3 = Tree
4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify

DATE: 12/22/97 **TIME:** ____________ **PROJECT NO. 973017NB**

WEATHER: Sunny

FIELD RECONNAISSANCE

RECORDED BY SH **EAST / ~~WEST~~ LEVEE** Field Crew: ML, D , DG (SCVWD)

SEEPAGE						
SLIP/ CRACK	Occasional hairline vertical cracks along "L" flood wall					
SETTLE- MENT			② minor sagging			
EROSION						
VEGETA- TION						
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

Plan View from Station 11+200 **to** 11+500 **Reference Location:** ____________

SEEPAGE	Bu cluster ▼		Bu cluster ▼			
SLIP/ CRACK					← ① → slipout of old levee	
SETTLE- MENT						
EROSION						
VEGETA- TION	② →			③ dead tree stump	② →	
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

In-board View from Station 11+200 **to** 11+500 **Reference Location:** ____________

SEEPAGE					Bu ▼ Bu ▼	Bu ▼
SLIP/ CRACK						
SETTLE- MENT						
EROSION			② 4"to6" deep			
VEGETA- TION	① →					
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

Out-board View from Station 11+200 **to** 11+500 **Reference Location:** ____________

SEEPAGE	SLIP/CRACK	SETTLEMENT	EROSION	VEGETATION
0 = None	0 = None	0 = None	0 = None	0 = Concrete/Paved
1 = Wet Spot	1 = Shallow slip <2m	1 = Hummocky/Undulated	1 = Rill	1 = Bare to short grass
2 = Spring	2 = Deep seated slip >2m	2 = Sagged	2 = Gully	2 = Scrubb, brush
3 = Artesian/Boil	3 = Tension crack	3 = Sink hole/caving	3 = Sheet/channel	3 = Tree
4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify

DATE: 12/22/97 TIME: ______________

PROJECT NO. 973017NB

WEATHER: SUNNY, WINDY

FIELD RECONNAISSANCE

RECORDED BY SH

EAST / ~~WEST~~ LEVEE FIELD CREW: ML, D , DG (SCVWD

SEEPAGE						
SLIP/ CRACK		Hairline vertical crack on "L" flood wall				Hairline vertical cracks along "L" flood wall
SETTLE- MENT						
EROSION						
VEGETA- TION						
REF. LOC.						→ Montague Expy
	0+050	0+100	0+150	0+200	0+250	0+300

Plan View from Station 11+500 to 11+800 Reference Location: ______________

SEEPAGE		Bu			Bu	⊗ 96"
SLIP/ CRACK						
SETTLE- MENT						
EROSION						③ Below bridge
VEGETA- TION	② →					→
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

In-board View from Station 11+500 to 11+800 Reference Location: ______________

SEEPAGE				Bu	Bu	
SLIP/ CRACK		6" undercut of toe				Longitudinal cracks near crest
SETTLE- MENT						
EROSION						
VEGETA- TION	① →				→	③ →
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

Out-board View from Station 11+500 to 11+800 Reference Location: ______________

SEEPAGE	SLIP/CRACK	SETTLEMENT	EROSION	VEGETATION
0 = None	0 = None	0 = None	0 = None	0 = Concrete/Paved
1 = Wet Spot	1 = Shallow slip <2m	1 = Hummocky/Undulated	1 = Rill	1 = Bare to short grass
2 = Spring	2 = Deep seated slip >2m	2 = Sagged	2 = Gully	2 = Scrubb, brush
3 = Artesian/Boil	3 = Tension crack	3 = Sink hole/caving	3 = Sheet/channel	3 = Tree
4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify

DATE: 12/22/97 TIME: ____________

PROJECT NO. 973017NB

FIELD RECONNAISSANCE

WEATHER: SUNNY

RECORDED BY SH

EAST / ~~WEST~~ LEVEE FIELD CREW: ML, D , DG(SCVWD)

SEEPAGE						
SLIP/ CRACK						
SETTLE-MENT						
EROSION						
VEGETA-TION						
REF. LOC.	Montague Expy					
	0+050	0+100	0+150	0+200	0+250	0+300

Plan View from Station 11+800 **to** 12+100 **Reference Location:** ____________

SEEPAGE						
SLIP/ CRACK					Slope change ; steeper @ toe →	
SETTLE-MENT						
EROSION						
VEGETA-TION	② →					
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

In-board View from Station 11+800 **to** 12+100 **Reference Location:** ____________

SEEPAGE				Bu cluster		
SLIP/ CRACK						
SETTLE-MENT						
EROSION		①,② surface disturbed by foot traffic				
VEGETA-TION	③ Landscaped, with trees →					
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

Out-board View from Station 11+800 **to** 12+100 **Reference Location:** ____________

SEEPAGE	SLIP/CRACK	SETTLEMENT	EROSION	VEGETATION
0 = None	0 = None	0 = None	0 = None	0 = Concrete/Paved
1 = Wet Spot	1 = Shallow slip <2m	1 = Hummocky/Undulated	1 = Rill	1 = Bare to short grass
2 = Spring	2 = Deep seated slip >2m	2 = Sagged	2 = Gully	2 = Scrubb, brush
3 = Artesian/Boil	3 = Tension crack	3 = Sink hole/caving	3 = Sheet/channel	3 = Tree
4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify

DATE: 12/22/97 TIME: ________ **PROJECT NO. 973017NB**

WEATHER: SUNNY, WINDY

FIELD RECONNAISSANCE

RECORDED BY SH

EAST / ~~WEST~~ LEVEE FIELD CREW: ML, D , DG(SCVWD)

* check plan for construction sequence with respect to slope geometry and access road slopes.

	0+050	0+100	0+150	0+200	0+250	0+300
SEEPAGE						
SLIP/ CRACK						
SETTLE-MENT						
EROSION						
VEGETA-TION						
REF. LOC.						

Plan View from Station 12+100 **to** 12+400 **Reference Location:** ________

	0+050	0+100	0+150	0+200	0+250	0+300
SEEPAGE						
SLIP/ CRACK	* slope change @ toe	; steeper →	1' cut at toe			
SETTLE-MENT						
EROSION			①	①		
VEGETA-TION	② →	→	→	→	→	→
REF. LOC.						

In-board View from Station 12+100 **to** 12+400 **Reference Location:** ________

	0+050	0+100	0+150	0+200	0+250	0+300
SEEPAGE			Bu cluster			
SLIP/ CRACK						
SETTLE-MENT						
EROSION						
VEGETA-TION	Landscaped;	thick ivy @	toe to	flat area →	→	→
REF. LOC.						

Out-board View from Station 12+100 **to** 12+400 **Reference Location:** ________

SEEPAGE	SLIP/CRACK	SETTLEMENT	EROSION	VEGETATION
0 = None	0 = None	0 = None	0 = None	0 = Concrete/Paved
1 = Wet Spot	1 = Shallow slip <2m	1 = Hummocky/Undulated	1 = Rill	1 = Bare to short grass
2 = Spring	2 = Deep seated slip >2m	2 = Sagged	2 = Gully	2 = Scrubb, brush
3 = Artesian/Boil	3 = Tension crack	3 = Sink hole/caving	3 = Sheet/channel	3 = Tree
4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify

DATE: 12/22/97 TIME: ____________ **PROJECT NO. 973017NB**

WEATHER: SUNNY, WINDY

FIELD RECONNAISSANCE

RECORDED BY SH **EAST / ~~WEST~~ LEVEE** FIELD CREW: ML, D , DG(SCVWD)

	0+050	0+100	0+150	0+200	0+250	0+300
SEEPAGE						
SLIP/ CRACK						
SETTLE-MENT						
EROSION						
VEGETA-TION						
REF. LOC.						

Plan View from Station 12+400 **to** 12+700 **Reference Location:** ____________

	0+050	0+100	0+150	0+200	0+250	0+300
SEEPAGE						
SLIP/ CRACK		① @ toe 1m cut	① @ toe 1m cut	① @ toe 1m cut	① @ toe *	① @ toe
SETTLE-MENT						
EROSION						
VEGETA-TION	②					
REF. LOC.						

In-board View from Station 12+400 **to** 12+700 **Reference Location:** ____________

	0+050	0+100	0+150	0+200	0+250	0+300
SEEPAGE			← Ditch @ toe, dry	Bu cluster	→	
SLIP/ CRACK						
SETTLE-MENT						
EROSION						
VEGETA-TION	Landscaped, with mature trees					→
REF. LOC.						

Out-board View from Station 12+400 **to** 12+700 **Reference Location:** ____________

* check stability (sudden draw down) consider scouring effect, river velocity

SEEPAGE	SLIP/CRACK	SETTLEMENT	EROSION	VEGETATION
0 = None	0 = None	0 = None	0 = None	0 = Concrete/Paved
1 = Wet Spot	1 = Shallow slip <2m	1 = Hummocky/Undulated	1 = Rill	1 = Bare to short grass
2 = Spring	2 = Deep seated slip >2m	2 = Sagged	2 = Gully	2 = Scrubb, brush
3 = Artesian/Boil	3 = Tension crack	3 = Sink hole/caving	3 = Sheet/channel	3 = Tree
4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify

DATE: 12/22/97 TIME: ____________

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WEATHER: SUNNY, WINDY

FIELD RECONNAISSANCE

RECORDED BY SH

EAST / ~~WEST~~ LEVEE FIELD CREW: ML, D , DG (SCVWD)

SEEPAGE						
SLIP/ CRACK						
SETTLE-MENT						
EROSION						
VEGETA-TION						
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

Plan View from Station 12+700 **to** 13+000 **Reference Location:** ____________

SEEPAGE		Bu ▼	cluster Bu ▼	Bu ▼	Bu ▼	, near crest Bu ▼
SLIP/ CRACK	① ▼ @ toe					
SETTLE-MENT						
EROSION				② related to Bu		
VEGETA-TION	② →	→	→	→	→	→
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

In-board View from Station 12+700 **to** 13+000 **Reference Location:** ____________

SEEPAGE	Bu ▼ @ edge of crest					
SLIP/ CRACK						
SETTLE-MENT		2" dia. circular indentation on surface; possible imprint of "sheep-foot" roller				
EROSION				①, ② ▼ somewhat bare surface; possibly due to sweeping motion of nearby tree branches?		
VEGETA-TION	Landscaped, mature tree line →	→	→	→	→	→
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

Out-board View from Station 12+700 **to** 13+000 **Reference Location:** ____________

SEEPAGE	SLIP/CRACK	SETTLEMENT	EROSION	VEGETATION
0 = None	0 = None	0 = None	0 = None	0 = Concrete/Paved
1 = Wet Spot	1 = Shallow slip <2m	1 = Hummocky/Undulated	1 = Rill	1 = Bare to short grass
2 = Spring	2 = Deep seated slip >2m	2 = Sagged	2 = Gully	2 = Scrubb, brush
3 = Artesian/Boil	3 = Tension crack	3 = Sink hole/caving	3 = Sheet/channel	3 = Tree
4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify

DATE: 12/22/97 **TIME:** ____________

PROJECT NO. 973017NB

WEATHER: SUNNY, WINDY

FIELD RECONNAISSANCE

RECORDED BY SH

EAST / ~~WEST~~ LEVEE FIELD CREW : ML, D , DG(SCUND)

SEEPAGE						
SLIP/ CRACK						
SETTLE-MENT						
EROSION						
VEGETA-TION						
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

Plan View from Station 13+000 **to** 13+300 **Reference Location:** ____________

SEEPAGE				*		
SLIP/ CRACK	① @ toe →	→	① @ toe 6m	① @ toe 15m		
SETTLE-MENT						
EROSION						
VEGETA-TION	②					
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

In-board View from Station 13+000 **to** 13+300 **Reference Location:** ____________

SEEPAGE						
SLIP/ CRACK						
SETTLE-MENT						
EROSION						
VEGETA-TION	Landscaped, mature tree line	→	→	→	→	→
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

Out-board View from Station 13+000 **to** 13+300 **Reference Location:** ____________

SEEPAGE	SLIP/CRACK	SETTLEMENT	EROSION	VEGETATION
0 = None	0 = None	0 = None	0 = None	0 = Concrete/Paved
1 = Wet Spot	1 = Shallow slip <2m	1 = Hummocky/Undulated	1 = Rill	1 = Bare to short grass
2 = Spring	2 = Deep seated slip >2m	2 = Sagged	2 = Gully	2 = Scrubb, brush
3 = Artesian/Boil	3 = Tension crack	3 = Sink hole/caving	3 = Sheet/channel	3 = Tree
4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify

* Consult with Dennis Ely regarding 1995 blowout detail; consider borehole creation

DATE: 12/22/97 **TIME:**

PROJECT NO. 973017NB

WEATHER: Sunny, Windy

FIELD RECONNAISSANCE

RECORDED BY SH

EAST / ~~WEST~~ LEVEE FIELD CREW: ML, D , DG(SCVWD)

SEEPAGE						
SLIP/ CRACK						
SETTLE-MENT						
EROSION						
VEGETA-TION						
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

Plan View from Station 13+300 **to** 13+600 **Reference Location:**

SEEPAGE						
SLIP/ CRACK	slope change; steps					
SETTLE-MENT						
EROSION	Scour at toe					
VEGETA-TION	②					
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

In-board View from Station 13+300 **to** 13+600 **Reference Location:**

SEEPAGE			Bu cluster	① wet on maintenance road		
SLIP/ CRACK	③ 3m longitudinal crack					
SETTLE-MENT						
EROSION	③					
VEGETA-TION	Landscaped, mature tree line →					
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

Out-board View from Station 13+300 **to** 13+600 **Reference Location:**

SEEPAGE	SLIP/CRACK	SETTLEMENT	EROSION	VEGETATION
0 = None	0 = None	0 = None	0 = None	0 = Concrete/Paved
1 = Wet Spot	1 = Shallow slip <2m	1 = Hummocky/Undulated	1 = Rill	1 = Bare to short grass
2 = Spring	2 = Deep seated slip >2m	2 = Sagged	2 = Gully	2 = Scrubb, brush
3 = Artesian/Boil	3 = Tension crack	3 = Sink hole/caving	3 = Sheet/channel	3 = Tree
4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify

DATE: 12/22/97 **TIME:**

PROJECT NO. 973017NB

WEATHER: SUNNY, WINDY

FIELD RECONNAISSANCE

RECORDED BY SH

EAST / ~~WEST~~ LEVEE FIELD CREW : ML, D , DG(SCVWD)

SEEPAGE						
SLIP/ CRACK						
SETTLE-MENT						
EROSION						
VEGETA-TION						
REF. LOC.		Thimble Rd				

0+050 0+100 0+150 0+200 0+250 0+300

Plan View from Station 13+600 **to** 13+900 **Reference Location:**

SEEPAGE						
SLIP/ CRACK						
SETTLE-MENT						
EROSION			Eroded embankment/levee at drain location under bridge			
VEGETA-TION	① →	→	→| ②	→	→	→
REF. LOC.						

0+050 0+100 0+150 0+200 0+250 0+300

In-board View from Station 13+600 **to** 13+900 **Reference Location:**

SEEPAGE						
SLIP/ CRACK						
SETTLE-MENT						
EROSION						
VEGETA-TION	③ →	→|	|② →	→	→	→
REF. LOC.						

0+050 0+100 0+150 0+200 0+250 0+300

Out-board View from Station 13+600 **to** 13+900 **Reference Location:**

SEEPAGE	SLIP/CRACK	SETTLEMENT	EROSION	VEGETATION
0 = None	0 = None	0 = None	0 = None	0 = Concrete/Paved
1 = Wet Spot	1 = Shallow slip <2m	1 = Hummocky/Undulated	1 = Rill	1 = Bare to short grass
2 = Spring	2 = Deep seated slip >2m	2 = Sagged	2 = Gully	2 = Scrubb, brush
3 = Artesian/Boil	3 = Tension crack	3 = Sink hole/caving	3 = Sheet/channel	3 = Tree
4 = Other, specify	4 = Other, specify	4 = Other, specify	4 = Other, specify	4 = Other, specify

DATE: 12/22/97 **TIME:** ____________ **PROJECT NO. 973017NB**

WEATHER: SUNNY, WINDY

FIELD RECONNAISSANCE

RECORDED BY SH

EAST / ~~WEST~~ LEVEE FIELD CREW: ML, D , DG(SCVWD

SEEPAGE						
SLIP/ CRACK						
SETTLE-MENT						
EROSION						
VEGETA-TION						
REF. LOC.						
	0+050	**0+100**	**0+150**	**0+200**	**0+250**	**0+300**

Plan View from Station 13+900 **to** 14+200 **Reference Location:** ____________

SEEPAGE				⊗ S.S. pipe crossing		
SLIP/ CRACK						Bldg/yard at toe 23' (8m) 12' (4m)
SETTLE-MENT						
EROSION						
VEGETA-TION						
REF. LOC.						
	0+050	**0+100**	**0+150**	**0+200**	**0+250**	**0+300**

In-board View from Station 13+900 **to** 14+200 **Reference Location:** ____________

SEEPAGE			Bu cluster ▼			
SLIP/ CRACK					↔ Shrinkage cracks	
SETTLE-MENT						
EROSION						
VEGETA-TION	① to ② →					
REF. LOC.						
	0+050	**0+100**	**0+150**	**0+200**	**0+250**	**0+300**

Out-board View from Station 13+900 **to** 14+200 **Reference Location:** ____________

SEEPAGE	SLIP/CRACK	SETTLEMENT	EROSION	VEGETATION
0 = None	0 = None	0 = None	0 = None	0 = Concrete/Paved
1 = Wet Spot	1 = Shallow slip <2m	1 = Hummocky/Undulated	1 = Rill	1 = Bare to short grass
2 = Spring	2 = Deep seated slip >2m	2 = Sagged	2 = Gully	2 = Scrubb, brush
3 = Artesian/Boil	3 = Tension crack	3 = Sink hole/caving	3 = Sheet/channel	3 = Tree
4 = Other, specify	4 = Other, specify	4 = Other, specify	4 = Other, specify	4 = Other, specify

DATE: 12/22/97 TIME: ____________

PROJECT NO. 973017NB

WEATHER: SUNNY, WINDY

FIELD RECONNAISSANCE

RECORDED BY SH

EAST / ~~WEST~~ LEVEE FIELD CREW: ML, D , DG (SCVWD)

SEEPAGE						
SLIP/ CRACK						
SETTLE-MENT						
EROSION						
VEGETA-TION						
REF. LOC.						→ usic
	0+050	0+100	0+150	0+200	0+250	0+300

Plan View from Station 14+200 **to** 14+500 **Reference Location:** ____________

SEEPAGE			→ weep holes @ 21' from crest; ~60' interval plugged 2 out of 8			
SLIP/ CRACK			①			
SETTLE-MENT						
EROSION	scour @ toe; cut around trees					
VEGETA-TION	②			concrete slope protection →		
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

In-board View from Station 14+200 **to** 14+500 **Reference Location:** ____________

SEEPAGE						
SLIP/ CRACK	Shrinkage cracks on surface →					
SETTLE-MENT						
EROSION						
VEGETA-TION	① to ② →					
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

Out-board View from Station 14+200 **to** 14+500 **Reference Location:** ____________

SEEPAGE	SLIP/CRACK	SETTLEMENT	EROSION	VEGETATION
0 = None	0 = None	0 = None	0 = None	0 = Concrete/Paved
1 = Wet Spot	1 = Shallow slip <2m	1 = Hummocky/Undulated	1 = Rill	1 = Bare to short grass
2 = Spring	2 = Deep seated slip >2m	2 = Sagged	2 = Gully	2 = Scrubb, brush
3 = Artesian/Boil	3 = Tension crack	3 = Sink hole/caving	3 = Sheet/channel	3 = Tree
4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify

DATE: 12/22/97 **TIME:** ______

PROJECT NO. 973017NB

WEATHER: Sunny, Windy

FIELD RECONNAISSANCE

RECORDED BY SH

EAST / ~~WEST~~ LEVEE Field Crew: ML, D , DG(SCVWD)

SEEPAGE						
SLIP/ CRACK						
SETTLE-MENT						
EROSION						
VEGETA-TION						
REF. LOC.	US 101					
	0+050	0+100	0+150	0+200	0+250	0+300

Plan View from Station 14+500 **to** 14+800 **Reference Location:** ______

SEEPAGE				⊗ 26" flap gate outfall		
SLIP/ CRACK						
SETTLE-MENT						
EROSION						
VEGETA-TION						
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

In-board View from Station 14+500 **to** 14+800 **Reference Location:** ______

SEEPAGE						
SLIP/ CRACK						
SETTLE-MENT						
EROSION						
VEGETA-TION						
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

Out-board View from Station 14+500 **to** 14+800 **Reference Location:** ______

SEEPAGE	SLIP/CRACK	SETTLEMENT	EROSION	VEGETATION
0 = None	0 = None	0 = None	0 = None	0 = Concrete/Paved
1 = Wet Spot	1 = Shallow slip <2m	1 = Hummocky/Undulated	1 = Rill	1 = Bare to short grass
2 = Spring	2 = Deep seated slip >2m	2 = Sagged	2 = Gully	2 = Scrubb, brush
3 = Artesian/Boil	3 = Tension crack	3 = Sink hole/caving	3 = Sheet/channel	3 = Tree
4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify

DATE: 12/23/97 **TIME:** ____

PROJECT NO. 973017NB

WEATHER: ____

FIELD RECONNAISSANCE

RECORDED BY SH **EAST / ~~WEST~~ LEVEE** FIELD CREW: ML, DS, DG (SCVWD

SEEPAGE						
SLIP/ CRACK						
SETTLE-MENT						
EROSION						
VEGETA-TION						
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

Plan View from Station 14+700 **to** 15+000 **Reference Location:** ____

SEEPAGE						
SLIP/ CRACK		old access ramp steep side slope ①				slope change @ toe 3' drop
SETTLE-MENT		3' drop @ toe 5'				
EROSION	scour @ toe 1' drop					
VEGETA-TION		2 with trees				
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300 15+000

In-board View from Station 14+700 **to** 8 15+000 **Reference Location:** 9 ____

SEEPAGE						
SLIP/ CRACK						
SETTLE-MENT						
EROSION						
VEGETA-TION						
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

Out-board View from Station 14+700 **to** 15+000 **Reference Location:** ____

SEEPAGE	SLIP/CRACK	SETTLEMENT	EROSION	VEGETATION
0 = None	0 = None	0 = None	0 = None	0 = Concrete/Paved
1 = Wet Spot	1 = Shallow slip <2m	1 = Hummocky/Undulated	1 = Rill	1 = Bare to short grass
2 = Spring	2 = Deep seated slip >2m	2 = Sagged	2 = Gully	2 = Scrubb, brush
3 = Artesian/Boil	3 = Tension crack	3 = Sink hole/caving	3 = Sheet/channel	3 = Tree
4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify

DATE: 12/23/97 TIME: ____________

PROJECT NO. 973017NB

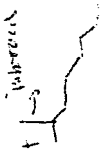
WEATHER: Sunny

FIELD RECONNAISSANCE

RECORDED BY SH

EAST / ~~WEST~~ LEVEE Field Crew: ML, DS, DG (scv -

* Need section for stability check.



SEEPAGE						
SLIP/ CRACK						
SETTLE-MENT						
EROSION						
VEGETA-TION						
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

Plan View from Station 15+000 **to** 15+300 **Reference Location:** ____________

SEEPAGE						
SLIP/ CRACK	* terrace section →		* 2' drop @ toe →			
SETTLE-MENT						
EROSION						
VEGETA-TION	② w/ trees					
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

In-board View from Station 15+000 **to** 15+300 **Reference Location:** ____________

SEEPAGE						
SLIP/ CRACK						
SETTLE-MENT						
EROSION						
VEGETA-TION						
REF. LOC.						
	0+050	0+100	0+150	0+200	0+250	0+300

Out-board View from Station 15+000 **to** 15+300 **Reference Location:** ____________

SEEPAGE	SLIP/CRACK	SETTLEMENT	EROSION	VEGETATION
0 = None	0 = None	0 = None	0 = None	0 = Concrete/Paved
1 = Wet Spot	1 = Shallow slip <2m	1 = Hummocky/Undulated	1 = Rill	1 = Bare to short grass
2 = Spring	2 = Deep seated slip >2m	2 = Sagged	2 = Gully	2 = Scrubb, brush
3 = Artesian/Boil	3 = Tension crack	3 = Sink hole/caving	3 = Sheet/channel	3 = Tree
4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify

DATE: 12/23/97 TIME: 11:15

PROJECT NO. 973017NB

WEATHER: Sunny

FIELD RECONNAISSANCE

RECORDED BY SH

EAST / ~~WEST~~ LEVEE Field Crew: ML, DS, DG (SCVWD)

	0+000 – 0+050	0+050 – 0+100	0+100 – 0+150	0+150 – 0+200	0+200 – 0+250	0+250 – 0+300
SEEPAGE					SOUTH END OF SURVEY	
SLIP/ CRACK						
SETTLE- MENT		① Tire rut →	→	→		
EROSION						
VEGETA- TION						
REF. LOC.						

0+050 0+100 0+150 0+200 0+250 0+300

Plan View from Station 15+300 to 15+510 Reference Location: 15+500

	0+000 – 0+050	0+050 – 0+100	0+100 – 0+150	0+150 – 0+200	0+200 – 0+250	0+250 – 0+300
SEEPAGE	⊗⊗ Twin 24" flapgate outfall SCSP	⊗ 18" CMP open (OK.)				
SLIP/ CRACK						
SETTLE- MENT						
EROSION						
VEGETA- TION						
REF. LOC.						

0+050 0+100 0+150 0+200 0+250 0+300

In-board View from Station 15+300 to 15+510 Reference Location: ______

	0+000 – 0+050	0+050 – 0+100	0+100 – 0+150	0+150 – 0+200	0+200 – 0+250	0+250 – 0+300
SEEPAGE	⊢	DITCH adjacent -	87 over crossing	→	→	
SLIP/ CRACK						
SETTLE- MENT						
EROSION						
VEGETA- TION						
REF. LOC.						

0+050 0+100 0+150 0+200 0+250 0+300

Out-board View from Station 15+300 to 15+510 Reference Location: ______

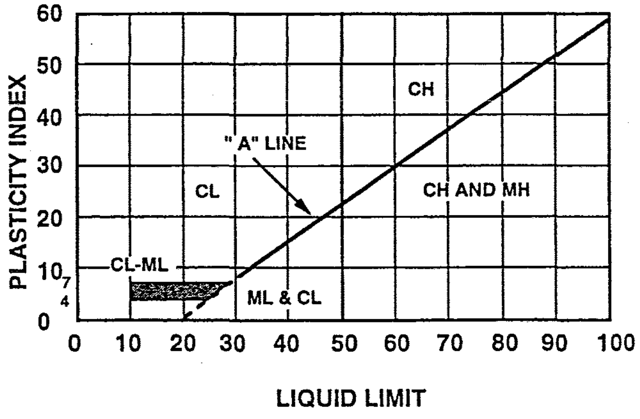
SEEPAGE	SLIP/CRACK	SETTLEMENT	EROSION	VEGETATION
0 = None	0 = None	0 = None	0 = None	0 = Concrete/Paved
1 = Wet Spot	1 = Shallow slip <2m	1 = Hummocky/Undulated	1 = Rill	1 = Bare to short grass
2 = Spring	2 = Deep seated slip >2m	2 = Sagged	2 = Gully	2 = Scrubb, brush
3 = Artesian/Boil	3 = Tension crack	3 = Sink hole/caving	3 = Sheet/channel	3 = Tree
4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify	4 = Other; specify

SAMPLE CLASSIFICATION CHART

UNIFIED SOIL CLASSIFICATION SCHEME

MAJOR DIVISIONS		SYMBOLS	TYPICAL NAMES
COARSE GRAINED SOIL (More than 1/2 of soil >no. 200 sieve size)	**GRAVELS** (More than 1/2 of coarse fraction > no. 4 sieve size)	GW	Well-graded gravels and gravel-sand mixtures, little or no fines
		GP	Poorly graded gravel or gravel-sand mixtures, little or no fines
		GM	Silty gravels, gravel-sand-silt mixtures
		GC	Clayey gravels, gravel-sand-clay mixtures
	SAND (More than 1/2 of coarse fraction < no. 4 sieve size)	SW	Well-graded sands or gravelly sands, little or no fines
		SP	Poorly-graded sands or gravelly sands, little or no fines
		SM	Silty sands, sand-silt mixtures
		SC	Clayey sands, sand-clay mixtures
FINE GRAINED SOIL (More than 1/2 of soil <no. 200 sieve size)	**SILTS & CLAYS** Liquid Limit < 50	ML	Inorganic silts and very fine sands, rock flour, silty or clayey, fine sands or clayey silts with slight plasticity
		CL	Inorganic clays of low to medium plasticity, gravelly clays. sandy clays, silty clays, lean clays
		OL	Organic silts and organic silty clays of low plasticity
	SILTS & CLAYS Liquid Limit > 50	MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts
		CH	Inorganic clays of high plasticity, fat clays
		OH	Organic clays of medium to high plasticity, organic silts
HIGHLY ORGANIC SOILS		Pt	Peat and other highly organic soils

PLASTICITY CHART



GRAIN SIZE CLASSIFICATION

CLASSIFICATION	RANGE OF GRAIN SIZES	
	U.S. Standard Sieve Size	Grain Size in Millimeters
BOULDERS	Above 12"	Above 305
COBBLES	12" to 3"	305 to 76.2
GRAVEL coarse (c) fine (f)	3" to No. 4 3" to 3/4" 3/4" to No. 4	76.2 to 4.76 76.2 to 19.1 19.1 to 4.76
SAND coarse (c) medium (m) fine (f)	No. 4 to No. 200 No. 4 to No. 10 No. 10 to No. 40 No. 40 to No. 200	4.76 to 0.074 4.76 to 2.00 2.00 to 0.420 0.420 to 0.074
SILT & CLAY	Below No. 200	Below 0.074

MOISTURE CONTENT

DRY	-No sign of water and soil dry to touch
MOIST	-Signs of water and soil is relatively dry to touch
WET	-Signs of water and soil definitely wet to touch; granular soil exhibits some free water when densified

SOIL CONSISTENCY/RELATIVE DENSITY

SILT, SAND AND GRAVEL	BLOWS/FT	SILT OR CLAY	UNCONFINED COMPRESSIVE STRENGTH (psf)	THUMB PENETRATION
Very loose	<4	Very Soft	< 500	Very easily - inches
Loose	5-10	Soft	500 - 1000	Easily - inches
Medium Dense	11-30	Medium (firm)	1000 - 2000	Moderate effort - inches
Dense	31-50	Stiff	2000 - 4000	Indented easily
Very Dense	>50	Very Stiff	4000 - 8000	Indented by nail
		Hard	> 8000	Difficult by nail

CLASSIFICATION MODIFIERS

TRACE	0 - 12%
SOME	12 - 30%

± MODIFIERS

URS

Figure E-1

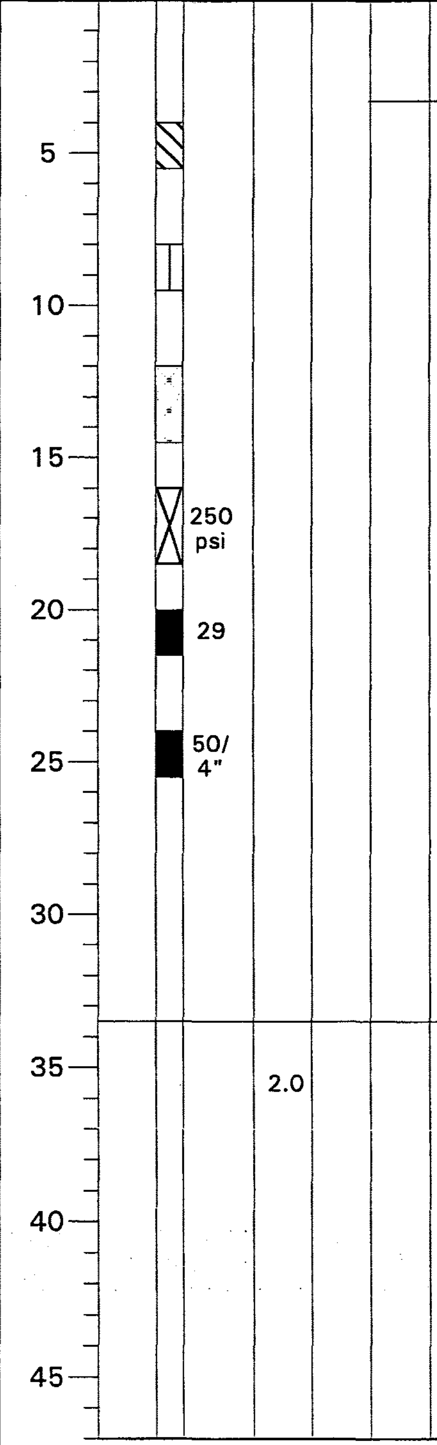
LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT
Santa Clara County, California

Log of Boring: LEGEND

Date Drilled:
Type of Boring: (as noted)
Hammer/drop (lb/in): (as noted)

Remarks:
Surface Elevation: feet (approx.)

Depth, Feet	Samples	Blows/Ft	Pocket Pen. (tsf)	Torvane (ksf)	Graphic Log	MATERIAL DESCRIPTION	Moisture Content, %	Dry Density, pcf	Unconfined Compressive Strength, psf	Other Tests/ Remarks



Arrow denotes bottom of fill layer
FILL

← 2 inch inside diameter Modified California sample

← 2 inch outside diameter Standard Split Spoon sample (Standard Penetration Test)

← Bulk sample

← Hydraulic Pressure required to push 3 inch outside diameter Shelby tube sampler

← Blow count with 140lb hammer falling 30in for 12in of penetration

← Blow count with 140lb hammer falling 30in for 4in of penetration

Groundwater at a time after drilling (as specified) ▼

Groundwater level at time of drilling ▽

KEY TO LABORATORY TESTS

← PP = Pocket Penetrometer reading in tons per square foot (tsf)

LL = Liquid Limit (%)
PI = Plasticity Index (%)
NOTE: PI = LL - (Plastic Limit [%])
+#4 = Percentage of material retained on #4 sieve
-#200 = Percentage of material passing #200 sieve
Su = Shear strength (cohesion) in tsf from UU triaxial shear strength test

LL=42
PI=21

+#4=13%
-#200=10%

Su=1.25tsf

Station: (meters) Offset: (meters:positive=east) (/)

Project: 95-973017NB.00

URS Greiner Woodward Clyde

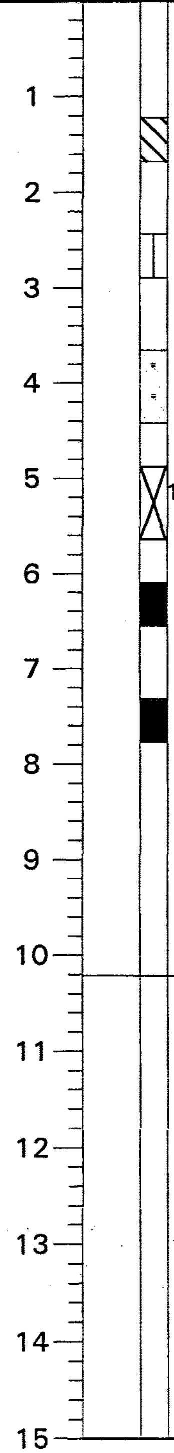
Sheet 1 of 2

Fig. E-2

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT
Santa Clara County, California

Log of Boring: LEGEND

Date Drilled:
Type of Boring: (as noted)
Hammer/drop: (as noted)
Remarks:
Surface Elevation: meters (approx.)



Depth, Meters	Samples	Blows/0.3m	Pocket Pen. (kPa)	Torvane (kPa)	Graphic Log	MATERIAL DESCRIPTION	Moisture Content, %	Dry Density, kN/m3	Unconfined Compressive Strength, kPa	Other Tests/ Remarks
						Arrow denotes bottom of fill layer FILL ↑				
						← 51mm inside diameter Modified California sample				
						← 51mm outside diameter Standard Split Spoon sample (Standard Penetration Test)				
						← Bulk sample				
		1500 kPa				← Hydraulic Pressure required to push 76mm outside diameter Shelby tube sampler				
		29				← Blow count with 63.6kg hammer falling 760mm for 130mm of penetration				
		50/ 130 mm				← Blow count with 63.6kg hammer falling 760mm for 130mm of penetration				
						Groundwater at a time after drilling (as specified) ▼				
						Groundwater level at time of drilling ▽				

KEY TO LABORATORY TESTS

			260			← PP = Pocket Penetrometer reading in kilo-pascals (kPa)				
						LL = Liquid Limit (%)				LL=42
						PI = Plasticity Index (%)				PI=21
						NOTE: PI = LL - (Plastic Limit [%])				
						+#4 = Percentage of material retained on #4 sieve				+#4=13%
						-#200 = Percentage of material passing #200 sieve				-#200=10%
						Su = Shear strength (cohesion) in kPa from UU triaxial shear strength test				Su=84.8kPa

Station: (meters) Offset: (meters:positive=east) (/)

Project: 95-973017NB.00 **URS Greiner Woodward Clyde** Sheet 2 of 2 Fig. E-2

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT
Santa Clara County, California

Log of Boring: EB-01

Date Drilled: 5/5/98
Type of Boring: 6in Auger; 4-7/8in Rotary Wash
Hammer/drop (lb/in): 140lb/30in

Remarks: Augered to 17-1/2 feet, sampled, then began rotary wash
Surface Elevation: 6.9 feet (approx.)

Depth, Feet	Samples	Blows/Ft	Pocket Pen. (tsf)	Torvane (ksf)	Graphic Log	MATERIAL DESCRIPTION	Moisture Content, %	Dry Density, pcf	Unconfined Compressive Strength, psf	Other Tests/ Remarks
						Poorly graded GRAVEL (GP-GC) with clay - FILL				
	1	28	>4.5			Cobbles to 4 inches **Lean to fat CLAY (CL/CH) with sand - FILL**				
	2	37	>4.5			Hard, moist, dark greenish gray, fine to coarse sand, trace gravel	13	121	6570	
5	3	37	>4.5			Increase in gravel				
	4	26								
	5	9	0.7			Alternating sand and gravel fill, brick pieces Dark brown				
10	6	200 450 psi	3.0							
	7	14	0.5			Increase in sand and gravel				
	8	13	1.5			FILL				
15	9	25	3.0			**Well-graded SAND (SW-SC) with clay and gravel** Very dense, wet, dark greenish gray, fine to coarse sand				
	10	57								
	11	60				Decrease in gravel				
20	12	14	1.0			**Fat CLAY (CH)** Medium, moist, dark brownish gray, very high plasticity				
	13	200 300 psi	1.2				25	101		
25	14	240 500 psi	0.5							
30										
	15	30				**Lean CLAY (CL)** Stiff, moist, brown, some sand	18	114	4260	
35										
						Poorly graded SAND (SP) Dense, wet, dark brown, fine sand				
	16	32								
40	17	34								
	18	32	2.2			**Lean to fat CLAY (CL/CH)** Very stiff, moist, brown mottled light gray, medium to high plasticity				
45						BOTTOM OF BORING AT 44-1/2				

Station: 6+23 (meters)   Offset: 87 (meters:positive=east)   (604119.00/1868979.00)

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT	Log of Boring: EB-01 (continued)

Depth, Feet	Samples	Blows/Ft	Pocket Pen. (ksf)	Torvane (ksf)	Graphic Log	MATERIAL DESCRIPTION	Moisture Content, %	Dry Density, pcf	Unconfined Compressive Strength, psf	Other Tests/ Remarks
						FEET				
50										
55										
60										
65										
70										
75										
80										
85										
90										
95										

Project: 95-973017NB.00	**URS Greiner Woodward Clyde**	Sheet 2 of 2	Fig. E-3

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT
Santa Clara County, California

Log of Boring: EB-02

Date Drilled: 5/6/98

Remarks: Augered to 12 feet, sampled, then began rotary wash

Type of Boring: 6in Auger; 4-7/8in Rotary Wash

Hammer/drop (lb/in): 140lb/30in

Surface Elevation: 14.8 feet (approx.)

Depth, Feet	Samples	Blows/Ft	Pocket Pen. (tsf)	Torvane (ksf)	Graphic Log	MATERIAL DESCRIPTION	Moisture Content, %	Dry Density, pcf	Unconfined Compressive Strength, psf	Other Tests/ Remarks
	1	31	>4.5			**1 to 2 inches Poorly graded GRAVEL (GP-GC) with clay - FILL**				
	2	32	1.5			**Lean to fat CLAY (CL/CH) FILL** Very stiff, dry, dark reddish brown, trace	14	113	7100	
	3	26	1.5			to some fine to coarse sand, medium to high plasticity				
5	4	31	>4.5			Dry to moist Dark brown	17	112	8780	
	5	27	4.0							
	6	16	2.5			Stiff	19	109	3030	
10	7	28	3.0							
	8	19	1.5			Stiff, moist, brown FILL				
	9	8	1.2			**Fat CLAY (CH)** Medium, moist, brownish gray				
	10	3	1.0				55	66	960	
15	11	5	0.7							
	12	160 260 psi	1.5				22	103		
20	13	16	1.4							
25	14	8	0.5			Organic odor	52	67	1010	
30	15	7	0.5							
35	16	10	0.2							
						Clayey GRAVEL (GC) Loose, wet, dark gray, trace fine to coarse sand, gravel to 3/4 inches				
	17	6								
40	18	11	0.5			**Lean to fat CLAY (CL/CH)** Stiff, moist to wet, olive green	35	86	2560	
	19	9	0.2			**Silty clayey SAND (SC-SM)** Loose, wet, dark gray, fine sand				
45						**Lean CLAY (CL)** Very soft, moist to wet, dark gray, low				

Station: 7+50 (meters) Offset: 74 (meters:positive=east) (603434.00/1869750.00)

Project: 95-973017NB.00

URS Greiner Woodward Clyde

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT

Log of Boring: EB-02

(continued)

Depth, Feet	Samples	Blows/Ft	Pocket Pen. (ksf)	Torvane (ksf)	Graphic Log	MATERIAL DESCRIPTION	Moisture Content, %	Dry Density, pcf	Unconfined Compressive Strength, psf	Other Tests/ Remarks
						to medium plasticity				
						BOTTOM OF BORING AT 44-1/2 FEET				
50										
55										
60										
65										
70										
75										
80										
85										
90										
95										

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT
Santa Clara County, California

Log of Boring: EB-03

Date Drilled: 5/7/98
Type of Boring: 6in Auger; 4-7/8in Rotary Wash
Hammer/drop (lb/in): 140lb/30in

Remarks: Augered to 13-1/2 feet, sampled, then began rotary wash; dry to 15 feet prior to rotary wash

Surface Elevation: 16.0 feet (approx.)

Depth, Feet	Samples	Blows/Ft	Pocket Pen. (tsf)	Torvane (ksf)	Graphic Log	MATERIAL DESCRIPTION	Moisture Content, %	Dry Density, pcf	Unconfined Compressive Strength, psf	Other Tests/ Remarks
	1	50	>4.5			**1 to 2 inches Poorly graded GRAVEL (GP-GC) with clay - FILL**				
	2	29	2.5			**Lean to fat CLAY (CL/CH) FILL** Very stiff, dry to moist, brown, trace to some fine to coarse sand, trace sand, medium to high plasticity				
	3	28	3.5							
5	4	34	4.2							
	5	21	2.5			Dark brown	22	106	4760	
	6	33	4.0			Increase in plasticity				
10	7	28	2.5			Lean CLAY (CL) - Stiff, brown				
	8	14	1.2			Dark brown				
	9	10	1.2			FILL				
	10	5	0.2			**Lean to fat CLAY (CL/CH)** Medium, moist, dark brown, medium to high plasticity, iron oxide mottled	31	92	1380	
15	11	14	2.2							
	12	21				Reddish brown				
	13	200 440 psi				Dark brownish gray				
20	14	15	2.2							
25	15	18	1.2				24	101	2950	
30	16	6	0.2			**Silty SAND (SM)** Loose, saturated, olive green, fine to coarse sand, alternating sand and clay layers 3 to 4 inches thick at 31-1/2 to 33 feet				
	17	7	1.0							
35						**Lean to fat CLAY (CL/CH)** Soft, moist, olive green, medium to high plasticity				
	18	12				**Silty SAND (SM)** Medium dense, wet, olive green, fine to medium sand				
40	19	25	0.5			**Lean CLAY (CL)** Soft, moist, olive green, medium plasticity				
						Silty SAND (SM) Medium dense, wet, fine to coarse sand				
	20	14	0.2			**Lean CLAY (CL)** Moist, dark grayish brown, medium to high plasticity	31	92	990	
45										

Station: 7+79 (meters) Offset: 46 (meters:positive=east) (603239.00/1870010.00)

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT | **Log of Boring: EB-03** (continued)

Depth, Feet	Samples	Blows/Ft	Pocket Pen. (ksf)	Torvane (ksf)	Graphic Log	MATERIAL DESCRIPTION	Moisture Content, %	Dry Density, pcf	Unconfined Compressive Strength, psf	Other Tests/ Remarks
						BOTTOM OF BORING AT 44-1/2 FEET				
50										
55										
60										
65										
70										
75										
80										
85										
90										
95										

Project: 95-973017NB.00 | **URS Greiner Woodward Clyde** | Sheet 2 of 2 | Fig. E-5

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT
Santa Clara County, California

Log of Boring: EB-04

Date Drilled: 5/15/98
Type of Boring: 6in Auger; 4-7/8in Rotary Wash
Hammer/drop (lb/in): 140lb/30in

Remarks: Augered to 15 feet, then began rotary wash; dry prior to rotary wash. Installed observation well

Surface Elevation: 16.7 feet (approx.)

Depth, Feet	Samples	Blows/Ft	Pocket Pen. (tsf)	Torvane (ksf)	Graphic Log	MATERIAL DESCRIPTION	Moisture Content, %	Dry Density, pcf	Unconfined Compressive Strength, psf	Other Tests/ Remarks
	1	13	3.7			**6 inches Poorly graded GRAVEL (GP-GC) with clay - FILL**				
	2	52	>4.5			**Lean CLAY (CL) FILL**				
	3	28	>4.5			Very stiff, dry to moist, reddish brown, medium plasticity, trace fine to coarse sand				
5	4	26	2.0			Patches of fine sand Stiff, moist, decrease in sand content	20	106	4170	
						Dark brown				
10	5	17	2.5			Refuse - glass, wood, etc., to 15 feet				
15	6	13	2.0				29	93	2440	
20										
	7	13								No recovery
	8	9	0.5			Soft, wet, dark brown; glass, wood, mixed refuse				
25	9	13								No recovery
	10	12	1.0			FILL				
30	11	13				**Lean CLAY (CL) with gravel** Soft, moist, dark brown				
	12	9								No recovery
	13	7								
35	14	22				**Silty SAND (SM) with gravel** Medium dense, wet, dark gray, fine to coarse sand, trace to some fine gravel				
	15	18								
	16	9				**Sandy lean CLAY (CL)** Soft, moist, gray, fine sand				
40										
	17	180 220 psi					25	101		
45	18	34				**Clayey SAND (SC)** Dense, wet, dark gray, fine sand				
						BOTTOM OF BORING AT 45-1/2				

Station: 7+95 (meters) Offset: 43 (meters:positive=east) (603083.00/1870090.00)

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT

Log of Boring: EB-04

(continued)

Depth, Feet	Samples	Blows/Ft	Pocket Pen. (ksf)	Torvane (ksf)	Graphic Log	MATERIAL DESCRIPTION	Moisture Content, %	Dry Density, pcf	Unconfined Compressive Strength, psf	Other Tests/ Remarks
						FEET				
50										
55										
60										
65										
70										
75										
80										
85										
90										
95										

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT
Santa Clara County, California

Log of Boring: EB-05

Date Drilled: 5/15/98
Type of Boring: 4-7/8in Rotary Wash
Hammer/drop (lb/in): 140lb/30in

Remarks: Installed observation well; see well log for details

Surface Elevation: 17.0 feet (approx.)

Depth, Feet	Samples	Blows/Ft	Pocket Pen. (tsf)	Torvane (ksf)	Graphic Log	MATERIAL DESCRIPTION	Moisture Content, %	Dry Density, pcf	Unconfined Compressive Strength, psf	Other Tests/ Remarks
						6 inches Poorly graded GRAVEL (GP-GC) with clay - FILL				
						Lean to fat CLAY (CL/CH) FILL Soft, dry, reddish brown, trace to some fine to coarse sand				
5										
						Medium, dark brown				
10										
						Soft, grayish brown				
						Refuse - glass, wood, etc.				
15										
	1	9	1.0			Medium, moist, dark brownish gray, refuse in sample				
20										
						FILL				
25						**Sandy lean CLAY (CL)** Soft, moist, dark greenish gray, low plasticity, trace fine sand and fine gravel				
						Lean CLAY (CL) Very soft, moist, black, low plasticity				
30	2	14								No recovery
	3	9	0.5	0.4						
35										
						BOTTOM OF BORING AT 36 FEET				
40										
45										

Station: 7+96 (meters) Offset: 45 (meters:positive=east) (603073.00/1870095.00)

Project: 95-973017NB.00

URS Greiner Woodward Clyde

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT
Santa Clara County, California

Log of Boring: EB-06

Date Drilled: 5/19/98
Type of Boring: 4-7/8in Rotary Wash
Hammer/drop (lb/in): 140lb/30in

Remarks: Installed observation well; see well log for details
Surface Elevation: 17.0 feet (approx.)

Depth, Feet	Samples	Blows/Ft	Pocket Pen. (tsf)	Torvane (ksf)	Graphic Log	MATERIAL DESCRIPTION	Moisture Content, %	Dry Density, pcf	Unconfined Compressive Strength, psf	Other Tests/ Remarks
					▨	**Lean CLAY (CL) with gravel - FILL** Very stiff to hard, moist, brown, decreasing gravel with depth				
5					▨					
10					▨					
					▨	With wood				
					▨	Some glass fragments				
15					▨					
					▨	**Lean CLAY (CL) - FILL** Medium, moist, gray				
20					▨					
25					▨					
	1 ☒	50 100 psi			▨	Copper wire and metal				
30						BOTTOM OF BORING AT 30 FEET				
35										
40										
45										

Station: 7+97 (meters) Offset: 45 (meters:positive=east) (603062.00/1870098.00)

Project: 95-973017NB.00 **URS Greiner Woodward Clyde** Sheet 1 of 1 Fig. E-8

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT
Santa Clara County, California

Log of Boring: EB-07

Date Drilled: 5/8/98
Type of Boring: 6in Auger; 4-7/8in Rotary Wash
Hammer/drop (lb/in): 140lb/30in

Remarks: Augered to 17 feet, sampled, then began rotary wash; dry to 19 feet prior to rotary wash

Surface Elevation: 16.5 feet (approx.)

Depth, Feet	Samples	Blows/Ft	Pocket Pen. (tsf)	Torvane (ksf)	MATERIAL DESCRIPTION	Moisture Content, %	Dry Density, pcf	Unconfined Compressive Strength, psf	Other Tests/ Remarks
	1	62	>4.5		**Lean CLAY (CL) with gravel - FILL** Hard, moist, dark brown				
	2	52	>4.5						
5	3	73	>4.5						
	4	34	>4.5		Damp	15	112	10520	
	5	39	>4.5						
	6	46	>4.5						
10	7	46	>4.5						
	8	22	3.7		**Lean CLAY (CL) FILL** Very stiff to hard, moist, dark gray, trace glass				
	9	31	3.5						
15	10	16	2.7		Brown and gray, with gravel FILL	26	96	2800	
	11	36	2.5		**Lean CLAY (CL)** Medium to stiff, moist, brown with orange brown mottling				
	12	18	2.0						
20	13	25	2.0		**Lean CLAY (CL)** Stiff, moist, dark gray with some brown mottling, occasional gravel	25	101	2610	
	14	32	1.7						
					Lean CLAY (CL) Medium to stiff, moist, light gray with orange brown mottling				
25	15	16	1.5		**Lean to fat CLAY (CL/CH)** Soft, moist, black, with burnt wood and oil-type sheen				
					Lean CLAY (CL) Soft, moist, gray with black mottling				
					Lean CLAY (CL) Medium, moist, gray				
30	16	11	0.7		With brown mottling	34	88	1660	
35	17	12	1.0	0.7					
40	18	8	1.2		With wood fragments				
	19	6	1.2						
45					BOTTOM OF BORING AT 44-1/2 FEET				

Station: 8+12 (meters) Offset: 44 (meters:positive=east) (602918.00/1870130.00)

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT
Santa Clara County, California

Log of Boring: EB-08

Date Drilled: 5/15/98

Type of Boring: 6in Auger; 4-7/8in Rotary Wash

Hammer/drop (lb/in): 140lb/30in

Remarks: Augered to 18 feet, then began rotary wash; dry prior to rotary wash

Surface Elevation: 18.5 feet (approx.)

Depth, Feet	Samples	Blows/Ft	Pocket Pen. (tsf)	Torvane (ksf)	Graphic Log	MATERIAL DESCRIPTION	Moisture Content, %	Dry Density, pcf	Unconfined Compressive Strength, psf	Other Tests/ Remarks
					▨	**Lean CLAY (CL) FILL** Hard, moist, brown				
	1	35			▨					
	2	65	>4.5		▨					
5	3	48	>4.5		▨		17	111	13960	
					▨	**Lean CLAY (CL) FILL** Moist, dark gray				
10					▨	**Lean CLAY (CL) FILL** Hard, moist, brown with dark gray mottling				
	4	56	4.0		▨		14	116	12450	
					▨	**Lean CLAY (CL) FILL** Well compacted, multicolored (gray, brown, light brown)				
15	5	50	>4.5		▨	**Lean CLAY (CL) FILL** Well compacted, moist, dark grayish brown, with wood, fine gravel FILL				
	6	23	3.5		▨					
					▨	**Lean CLAY (CL)** Stiff, moist, dark brown				
20	7	14	1.0		▨	Medium, gray	25	100	2910	
25	8	7	1.0		▨	Medium to soft, dark gray, some sand				
30	9	10	1.0		▨		36	84	820	
					▥	**Elastic SILT (MH)** Medium, moist, dark gray, with wood fragments				
35	10	7			▥					
40	11	8	0	0.4	▨	**Lean to fat CLAY (CL/CH)** Soft, moist, gray with black mottling	67	58	960	
	12	7	0.5	0.6	▨					
45						BOTTOM OF BORING AT 44-1/2 FEET				

Station: 8+33 (meters) Offset: 48 (meters:positive=east) (602753.00/1870235.00)

Project: 95-973017NB.00 **URS Greiner Woodward Clyde** Sheet 1 of 1 Fig. E-10

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT
Santa Clara County, California

Log of Boring: EB-09

Date Drilled: 5/12/98
Type of Boring: 6in Auger; 4-7/8in Rotary Wash
Hammer/drop (lb/in): 140lb/30in

Remarks: Augered to 16 feet, sampled, then began rotary wash; dry to 18-1/2 feet prior to rotary wash

Surface Elevation: 21.8 feet (approx.)

Depth, Feet	Samples	Blows/Ft	Pocket Pen. (tsf)	Torvane (ksf)	MATERIAL DESCRIPTION	Moisture Content, %	Dry Density, pcf	Unconfined Compressive Strength, psf	Other Tests/ Remarks
					Lean CLAY (CL) with sand - FILL Hard, moist, brown, with sand and some gravel				
	1	29	4.5						
	2	17	>4.5			10	125	2330	
5	3	500 psi	>4.5						
	4	55	>4.5						
					Lean CLAY (CL) FILL Hard, moist, dark gray				
	5	47	>4.5			25	98	7550	
10	6	200 400 psi	>4.5			17	109		
					With roots and wood	19	109		LL=36 PI=16
	7	27	4.5		FILL				
					Dark gray with brown, with gravel				
	8	37	3.5		**Lean CLAY (CL)** Stiff, moist, brown	26	98	5770	
15	9	44	3.0						
					With fine roots	21	102		
	10	120 420 psi	1.5			56	93		LL=35 PI=14
					Lean CLAY (CL) Medium to stiff, moist, brown	28	94		
20					**Lean CLAY (CL)** Soft, moist, gray and brown mottled				
	11	3	0	0.2		30	90	620	
25	12	50 100 psi	0.5						
30	13	9	0	0.6	Grayer	31	93	1710	
					Lean CLAY (CL) Soft, moist, gray, with occasional sand and some black wood fragments				
35	14	7	0.5	0.7					
40	15	8		0.7		48	70	960	
	16	8		0.3					
45					BOTTOM OF BORING AT 44-1/2 FEET				

Station: 9+55 (meters) Offset: 44 (meters:positive=east) (601896.00/1871026.00)

Project: 95-973017NB.00

URS Greiner Woodward Clyde

Sheet 1 of 1

Fig. E-11

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT
Santa Clara County, California

Log of Boring: EB-10

Date Drilled: 5/14/98
Type of Boring: 6in Auger; 4-7/8in Rotary Wash
Hammer/drop (lb/in): 140lb/30in

Remarks: Augered to 16-1/2 feet, sampled, then began rotary wash; dry to 19 feet prior to rotary wash

Surface Elevation: 22.5 feet (approx.)

Depth, Feet	Samples	Blows/Ft	Pocket Pen. (tsf)	Torvane (ksf)	Graphic Log	MATERIAL DESCRIPTION	Moisture Content, %	Dry Density, pcf	Unconfined Compressive Strength, psf	Other Tests/ Remarks
						Gravelly lean CLAY (CL) FILL Hard, moist, reddish brown and gray mottled				
	1	25	>4.5							
	2	25	>4.5			**Lean CLAY (CL) FILL** Very stiff to hard, moist, gray with dark brown mottling				
5	3	28	3.0				19	108	4970	
						Lean CLAY (CL) FILL Very stiff, moist, dark gray				
10										
	4	31	>4.5			**Lean CLAY (CL) FILL** Hard, moist, dark brown				
	5	21	1.5			Stiff FILL	16	110	4560	
15	6	12	1.0			**Sandy lean CLAY (CL)** Medium, moist, brown	22	96	790	
	7	50 100 psi	1.0				36	85		
20	8	16	1.0			**Lean CLAY (CL)** Medium, moist, gray	37	82	1360	
25	9	39	3.0							
30	10	33				**Silty SAND (SM)** Dense, brown Gravel lens				
						Lean CLAY (CL) Medium to stiff, moist, brown with gray mottling; some soft, gray gravel chunks over 1/2 inch				
35	11	30	1.0				25	101	2860	
						Dark gray gravel lens, gravel to 3/4 inches				
40	12	41				**Lean CLAY (CL)** Medium, moist, gray with brown mottling; with intermittent sand (SP-SM) lenses				
	13	26	1.0			Gray, no sand				
45						BOTTOM OF BORING AT 44-1/2 FEET				

Station: 10+85 (meters) Offset: 42 (meters:positive=east) (601033.00/1871964.00)

Project: 95-973017NB.00 **URS Greiner Woodward Clyde** Sheet 1 of 1 Fig. E-12

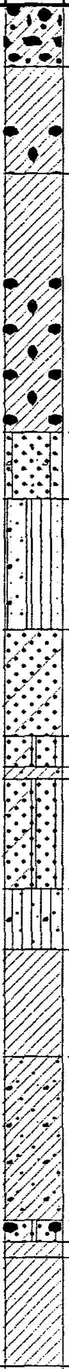
LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT
Santa Clara County, California

Log of Boring: EB-11

Date Drilled: 5/7/98
Type of Boring: 4-7/8in Rotary Wash
Hammer/drop (lb/in): 140lb/30in

Remarks: Augered to 17-1/2 feet, sampled, then began rotary wash

Surface Elevation: 23.0 feet (approx.)



Depth, Feet	Samples	Blows/Ft	Pocket Pen. (tsf)	Torvane (ksf)	MATERIAL DESCRIPTION	Moisture Content, %	Dry Density, pcf	Unconfined Compressive Strength, psf	Other Tests/ Remarks
	1	14	2.0		**Gravelly lean CLAY (CL) FILL** Very stiff, moist, brown to red brown				
	2	25	2.5		**Lean CLAY (CL) FILL** Very stiff, moist, dark brown	20	106	2690	
5	3	150 450 psi (ref)	>4.5		With fine gravel				
	4	64	>4.5		**Lean CLAY (CL) FILL** Hard, dry to moist, gray brown				
	5	45	3.7						
10	6	37	>4.5		With dark gravels				
	7	37	>4.5			15	112	8410	
	8	200 psi			FILL	17 17	85 98		LL=23 PI=1
15	9	31			**Silty SAND (SM)** Dense, wet, brown, increasing fines content with depth	18	106		
	10	12			**Sandy SILT (ML) to Silty SAND (SM)** Medium dense, moist, brown				
	11		2.0		▽	24			+#4=0 -#200=41% -5micr=11%
20	12	10	0.5		**Clayey SAND (SC)** Medium dense, gray, with fine roots	26	94		+#4=0 -#200=28%
					Less fines				
25					**Silty clayey SAND (SC-SM)** Dark gray				
	13	13			**Sandy lean CLAY (CL)** Dark gray				
					Silty clayey SAND (SC-SM) Medium dense, moist, dark gray Increase in fines				
30	14	3			**fine Sandy SILT (ML)** Soft, moist, dark gray				
					Lean CLAY (CL) Soft, moist, dark gray Increase in sand				
35	15	5		0.3	**Sandy lean CLAY (CL)** Soft, gray to dark gray, with wood	64	57	910	
					Increase in sand				
40	16	9	1.7		**Silty clayey SAND (SC-SM) with gravel** Gravel to 1/4 inch				
					Lean CLAY (CL) Medium, gray with brown mottling				
	17	33	1.0		**Lean CLAY (CL)** Medium, moist, brown	27	98	3020	
45					BOTTOM OF BORING AT 44-1/2 FEET				

Station: 11+29 (meters) Offset: 42 (meters:positive=east) (600908.00/1872392.00)

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT
Santa Clara County, California

Log of Boring: EB-12

Date Drilled: 5/12/98
Type of Boring: 6in Auger; 4-7/8in Rotary Wash
Hammer/drop (lb/in): 140lb/30in

Remarks: Augered to 20 feet, then began rotary wash; dry prior to rotary wash

Surface Elevation: 24.3 feet (approx.)

Depth, Feet	Samples	Blows/Ft	Pocket Pen. (tsf)	Torvane (ksf)	Graphic Log	MATERIAL DESCRIPTION	Moisture Content, %	Dry Density, pcf	Unconfined Compressive Strength, psf	Other Tests/ Remarks
						Lean CLAY (CL) FILL Stiff to hard, moist, brown, with gravel lenses				
	1	18	2.5							
	2	34	>4.5				17	115	11330	
5	3	46	4.5							
	4	53	4.0							
	5	37								
						Lean CLAY (CL) FILL Stiff to very stiff, gray with orange brown mottling, grass blades and stems				
	6	23	3.0							
10	7	26				With some gravel	22	104	3260	
	8	29				FILL				
	9	17	2.5			**Lean CLAY (CL)** Stiff, moist, gray and brown mottled, with shells	22	101	2490	
15	10	15								
	11	26	1.7							
	12	26	3.0			Dark gray				
						Lean CLAY (CL) Medium, gray brown with light gray mottling				
20	13	50	4.0			**Lean CLAY (CL)** Very stiff, moist, light yellowish brown	19	111	6450	
						Increase in sand				
25	14	18				**Silty SAND (SM)** Dense, brown				
						Lean CLAY (CL) Stiff, moist, light tan and yellow brown				
30	15	21	1.5							
						Lean CLAY (CL) Soft, moist, reddish brown with gray mottling				
35	16	15	1.0	0.7		Soft	31	92	1670	
40	17	26				**Silty SAND (SM)** Medium dense, wet, brownish gray				
						BOTTOM OF BORING AT 41-1/2 FEET				
45										

Station: 11+50 (meters) Offset: 43 (meters:positive=east) (600683.00/1872382.00)

Project: 95-973017NB.00 **URS Greiner Woodward Clyde** Sheet 1 of 1 Fig. E-14

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT
Santa Clara County, California

Log of Boring: EB-13

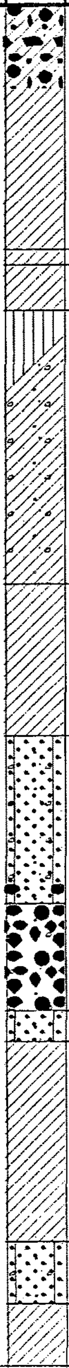
Date Drilled: 5/14/98

Type of Boring: 6in Auger; 4-7/8in Rotary Wash

Hammer/drop (lb/in): 140lb/30in

Remarks: Augered to 12 feet, sampled, then began rotary wash; dry to 13 feet prior to rotary wash

Surface Elevation: 27.9 feet (approx.)



Depth, Feet	Samples	Blows/Ft	Pocket Pen. (tsf)	Torvane (ksf)	MATERIAL DESCRIPTION	Moisture Content, %	Dry Density, pcf	Unconfined Compressive Strength, psf	Other Tests/ Remarks
	1	48	>4.5		**Lean CLAY (CL) with gravel - FILL** Hard, moist, brown, trace sand				
	2	52	>4.5		No gravel				
5	3	48	>4.5			14	118	13680	
					Lean CLAY (CL) FILL Very stiff, moist, dark gray, with wood				
10	4	16	2.7		**Lean CLAY (CL) FILL** Very stiff, brown, increase in silt with depth FILL	13	106	1700	
	5	10	1.5						
15	6	12	0.5	0.4	**SILT (ML)** Medium to stiff, moist, brown, increase in sand with depth Grades to Lean CLAY (CL) with sand - Soft to medium, moist, brown	28	93	1720	
20	7	16	2.7		**Lean CLAY (CL)** Stiff, moist, brown with gray mottling	23	102	2320	
25	8	33			**Silty SAND (SM)** Dense, wet, brown to dark brown With gravels				
30	9	37			**Poorly graded GRAVEL (GP) with sand** Dense, wet, dark gray brown				
					Silty SAND (SM) Medium dense, wet, dark gray				
35	10	14	2.5		**Lean CLAY (CL)** Medium to stiff, moist, gray	26	99	1950	
40	11	49			**Silty SAND (SM)** Dense, moist, brown				
	12	29	2.2		**Lean CLAY (CL)** Very stiff, moist, dark brownish gray, with occasional gravel	21	106	5780	
45					BOTTOM OF BORING AT 44-1/2 FEET				

Station: 12+80 (meters)   Offset: 80 (meters:positive=east)   (599556.00/1872821.00)

Project: 95-973017NB.00	URS Greiner Woodward Clyde	Sheet 1 of 1	Fig. E-15

4/20/00 GUADE GUADE

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT Santa Clara County, California	Log of Boring: EB-14

Date Drilled: 5/12/98
Type of Boring: 6in Auger; 4-7/8in Rotary Wash
Hammer/drop (lb/in): 140lb/30in

Remarks: Augered to 16 feet, then began rotary wash; dry prior to rotary wash

Surface Elevation: 28.1 feet (approx.)

Depth, Feet	Samples	Blows/Ft	Pocket Pen. (tsf)	Torvane (ksf)	Graphic Log	MATERIAL DESCRIPTION	Moisture Content, %	Dry Density, pcf	Unconfined Compressive Strength, psf	Other Tests/ Remarks
	1	8	1.0			**4 to 6 inches Poorly graded GRAVEL (GP-GC) with clay - FILL**				
	2	25	>4.5			**Lean CLAY (CL) FILL** Hard, moist, dark brown, medium plasticity, trace sand				
	3	37	>4.5			Dry, trace fine sand	22	106	6860	
5	4	44	4.5							
	5	200 512 psi	>4.5			Dark grayish brown				
	6	200 416 psi								
10						**Poorly graded SAND (SP-SM) with silt - FILL** Dense, brown, fine sand, trace silt				
	7	22	3.0			FILL				
	8	16	1.5			**Lean CLAY (CL) FILL** Very stiff, moist, dark brown	24	97	3710	
15	9	200 440 psi	2.5			**Lean CLAY (CL)** Stiff, moist, dark reddish brown, medium plasticity				
	10	18	1.5			**Fat CLAY (CH)** Stiff to very stiff, moist, dark brown, medium to high plasticity	28	95	4400	
	11	200 400 psi					35	87		
20	12	11	1.2			**Lean CLAY (CL)** Medium to stiff, moist, light brownish gray, medium plasticity, trace to some fine to medium sand	25	100	1100	
25	13	9	0.2	0.4		Silty SAND (SM) lens Light greenish gray, trace fine gravel				
30						**Poorly graded GRAVEL (GP-GC) with clay and sand** Medium dense to dense, fine to coarse sand, fine to coarse gravel to 1 inch, trace silt				
	14	23								
	15	57				Grades to Poorly graded GRAVEL (GP) with sand				
35						**Lean CLAY (CL)** Medium, moist, light greenish gray, medium plasticity				
	16	21	1.0							
40	17	26	0.7			Some coarse gravel to 1 inch	34	87	1370	
	18	25	1.5			Stiff				
45						BOTTOM OF BORING AT 44-1/2 FEET				

Station: 13+60 (meters) Offset: 55 (meters:positive=east) (598802.00/1872690.00)

Project: 95-973017NB.00	URS Greiner Woodward Clyde	Sheet 1 of 1	Fig. E-16

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT
Santa Clara County, California

Log of Boring: EB-15

Date Drilled: 5/13/98
Type of Boring: 6in Auger; 4-7/8in Rotary Wash
Hammer/drop (lb/in): 140lb/30in

Remarks: Augered to 5-1/2 feet, then began rotary wash; dry prior to rotary wash

Surface Elevation: 32.5 feet (approx.)

Depth, Feet	Samples	Blows/Ft	Pocket Pen. (tsf)	Torvane (ksf)	MATERIAL DESCRIPTION	Moisture Content, %	Dry Density, pcf	Unconfined Compressive Strength, psf	Other Tests/ Remarks
					Lean CLAY (CL) with gravel - FILL Medium, moist, brown				
	1	28	2.5		**Lean CLAY (CL) FILL** Very stiff, moist, dark brown				
	2	28	4.0		**Lean CLAY (CL) FILL** Stiff to hard, moist, brown, trace gravel	15	114	10680	
5	3	46	2.5						
10	4	14	2.0		Medium, moist, silty				
	5	13	1.5		FILL	25	94	2850	
					Lean CLAY (CL) Medium, moist, gray with reddish brown mottling				
	6	10	1.0						
15	7	7	0.7			25	96	1850	
	8	10	0.5						
20	9	11	1.0		**Lean CLAY (CL)** Medium, moist, light brown with reddish brown mottling	28	96	2320	
25	10	13	1.5		**Lean CLAY (CL) to SILT (ML) with sand** Medium to stiff, moist, dark gray, increase in sand with depth ▽				
					Silty SAND (SM) with gravel Medium dense, moist, dark gray				
30	11	9			**Lean CLAY (CL)** Medium, moist, gray				No recovery
	12	17	1.0		Increase in sand, decrease in plasticity	22	106	1300	
35	13	25	0.7						
					Lean CLAY (CL) Stiff, moist, light brown with reddish brown mottling				
40	14	23	2.5						
					BOTTOM OF BORING AT 41-1/2 FEET				
45									

Station: 13+715 (meters) Offset: 39 (meters:positive=east) (598693.00/1872697.00)

Project: 95-973017NB.00

URS Greiner Woodward Clyde

Sheet 1 of 1

Fig. E-17

4/20/00 GUADE GUADE

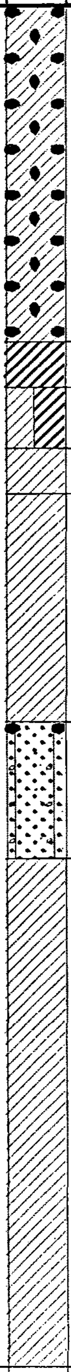
LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT
Santa Clara County, California

Log of Boring: EB-16

Date Drilled: 5/13/98
Type of Boring: 6in Auger; 4-7/8in Rotary Wash
Hammer/drop (lb/in): 140lb/30in

Remarks: Augered to 10 feet, sampled, then began rotary wash; dry to 11-1/2 feet prior to rotary wash

Surface Elevation: 33.2 feet (approx.)

Depth, Feet	Samples	Blows/Ft	Pocket Pen. (tsf)	Torvane (ksf)	Graphic Log	MATERIAL DESCRIPTION	Moisture Content, %	Dry Density, pcf	Unconfined Compressive Strength, psf	Other Tests/ Remarks
						**Lean CLAY (CL) with gravel - FILL** Hard, dry to moist, brown				
	1	55	4.5							
	2	56	>4.5							
5	3	52	4.0				14	118	11050	
10	4	25	2.7			FILL **Fat CLAY (CH)** Stiff, moist, dark gray	27	95	5940	
	5	22	3.0			**Lean to fat CLAY (CL/CH)** Very stiff, moist, dark gray with gray mottling				
	6	27	3.0							
15	7	24	1.5			**Lean CLAY (CL)** Medium, moist, gray and brown mottled				
						Lean CLAY (CL) Medium to stiff, moist, brown with light brown mottling				
20	8	14	0.7				21	106	1820	
						Silty SAND (SM) with gravel Medium dense, brown, trace fine gravel, decrease in gravel below 24 feet				
25	9	25								
						Lean CLAY (CL) Medium, moist, gray with reddish brown mottling				
30	10	17	1.0				28	95	1750	
35	11	20								
	12	37	2.0							
40	13	52	3.0			Very stiff, olive gray with light gray mottling	24	101	9130	
	14	17	2.0							
45						BOTTOM OF BORING AT 44-1/2 FEET				

Station: 14+04 (meters) Offset: 38 (meters:positive=east) (598455.00/1872853.00)

Project: 95-973017NB.00 **URS Greiner Woodward Clyde** Sheet 1 of 1 Fig. E-18

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT
Santa Clara County, California

Log of Boring: EB-17

Date Drilled: 5/5/98
Type of Boring: 6in Auger; 4-7/8in Rotary Wash
Hammer/drop (lb/in): 140lb/30in

Remarks: Augered to 20 feet, then began rotary wash
Surface Elevation: 40.7 feet (approx.)

Depth, Feet	Samples	Blows/Ft	Pocket Pen. (tsf)	Torvane (ksf)	Graphic Log	MATERIAL DESCRIPTION	Moisture Content, %	Dry Density, pcf	Unconfined Compressive Strength, psf	Other Tests/ Remarks
						Lean CLAY (CL) FILL Moderately compacted, moist, brown				
	1	28								
	2	29	>4.5			With wood fragments				
5	3	23	>4.5				16	114	5100	
	4	18	2.5			With some fat clay and 2 inch gravel				
	5	26	3.2			FILL				
						Fat CLAY (CH) Stiff, moist, black with gray mottling				
10	6	25	3.5			**Lean CLAY (CL)** Stiff, moist, gray with reddish brown mottling	30	90	7120	
	7	24	3.5				26	95	6930	
	8	33	3.5			**Lean CLAY (CL)** Stiff, moist, brown				
	9	24	3.5			**Lean CLAY (CL)** Stiff, moist, dark brown	20	103	4080	
15										
						▼ 5/6/98				
20	11	63				**Well-graded GRAVEL (GW) with sand** ▽ Very dense, multicolored gravel to 2 inches				
25	12	8				**Poorly graded SAND (SP)** Loose, brown to dark gray (wood/organics), hydrogen sulfate odor, with wood fragments				
30	13	14	1.0- 1.5			**SILT (ML)** Medium, moist, gray Increasing clay content				
						Lean CLAY (CL) Medium, moist, gray				
35	14	28	1.2				31	89	1600	
40	15	31	1.7			With some brown mottling				
	16	24	2.5			Medium to stiff, increase in brown color with occasional gravel to 1/4 inches	22	105	2730	
45						BOTTOM OF BORING AT 44-1/2 FEET				

Station: 15+00 (meters)   Offset: 39 (meters:positive=east)   (597771.00/1873374.00)

Project: 95-973017NB.00   **URS Greiner Woodward Clyde**   Sheet 1 of 1   Fig. E-19

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT
Santa Clara County, California

Log of Boring: WB-01

Date Drilled: 5/4/98
Type of Boring: 6in Auger; 4-7/8in Rotary Wash
Hammer/drop (lb/in): 140lb/30in

Remarks: Augered to 18 feet, then began rotary wash; dry prior to rotary wash
Surface Elevation: 14.0 feet (approx.)

Depth, Feet	Samples	Blows/Ft	Pocket Pen. (tsf)	Torvane (ksf)	Graphic Log	MATERIAL DESCRIPTION	Moisture Content, %	Dry Density, pcf	Unconfined Compressive Strength, psf	Other Tests/ Remarks
	1	44	>4.5			**6 inches Poorly graded GRAVEL (GP-GC) with clay - FILL**	11	120	12650	
	2	35	4.0			**Gravelly lean to fat CLAY (CL/CH) FILL**				
	3	17	2.7			Hard, dry, brown, some fine to coarse sand	18	103	3140	
5	4	8	2.0			Moist, light greenish gray, decrease in sand and gravel Dark brown, glass fragments				
	5	7	1.0				25	92	1310	
	6	8	1.0			**Fat CLAY (CH) FILL** Stiff, moist, dark brownish gray, trace fine to coarse sand, refuse (rubber products)				
10	7	7	1.7				23	102		
	8	7	0.5							
	9	19	1.2				23			
	10	14	1.0			Large wood fragments	19	108	3750	
15										
	11	11	0.7			Color variable	25	99	2110	
	12	13	1.0				19	114	3680	
	13	13	1.2			Artificial products (rubber, nylon)	26	98	2510	
20						FILL				
	14	16	3.0			**Lean to fat CLAY (CL/CH)** Stiff, moist, dark greenish gray, low to medium plasticity, trace fine sand	31	89	2370	
	15	18					26	97	3150	
	16	18	2.5			Mottles with white and reddish brown	22	105	3540	
25										
30						**Silty SAND (SM)** Medium dense, wet, yellowish brown, fine sand, alternating with minor clay lenses				
	17	16					21	107		+#4=1% -#200=28%
						Lean to fat CLAY (CL) Stiff, moist, medium yellowish brown				
35										
	18	19	2.5				31	91	2500	
40										
	19	10	0.7	0.7		Soft, brown mottled gray	34	88	960	
	20	5				**Silty SAND (SM)** Loose, wet, fine sand, trace to some silt				
45						BOTTOM OF BORING AT 44-1/2 FEET				

Station: 7+32 (meters) Offset: -44 (meters:positive=east) (603355.00/1869549.00)

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT
Santa Clara County, California

Log of Boring: WB-02

Date Drilled: 5/5/98
Type of Boring: 6in Auger; 4-7/8in Rotary Wash
Hammer/drop (lb/in): 140lb/30in

Remarks: Augered to 18-1/2 feet, sampled, then began rotary wash; dry to 20 feet prior to rotary wash
Surface Elevation: 17.2 feet (approx.)

Depth, Feet	Samples	Blows/Ft	Pocket Pen. (tsf)	Torvane (ksf)	Graphic Log	MATERIAL DESCRIPTION	Moisture Content, %	Dry Density, pcf	Unconfined Compressive Strength, psf	Other Tests/ Remarks
	1	31	>4.5			**Lean CLAY (CL) - FILL** Hard, dry to moist, dark reddish brown, trace fine to coarse sand, patches of fine gravel				
	2	51	>4.5							
	3	25	3.2							
5	4	30	4.0			Moist	21	109	8290	
	5	29	>4.5			Dark brownish gray				
	6	27	4.0							
10	7	29	3.2			Increase in silt content	18	101	3340	
	8	13	3.7							
	9	13	1.0			Heterogeneous clay fill (window glass observed)				
	10	5	1.0			Window glass, refuse				
15	11	6	0.7	0.4		Plastic in cuttings	28	93	1830	
	12	7	0.7	0.6		Bottle glass in cuttings FILL				
	13	5	1.2			**Lean CLAY (CL)** Medium to stiff, moist, dark brown, very low plasticity, patches of fine sand	39	79	1080	
20	14	7	<0.5	0.6		Soft, wet, dark brown, organic, very low plasticity				
	15	1					34	85	450	
	16	2								
25										
30	17	5	0.5			**Lean CLAY (CL)** Soft, moist, dark gray, medium plasticity Becoming sandy				
35	18	32				**Clayey SAND (SC)** Dense, wet, brown				
	19	5				**Well-graded GRAVEL (GW)** Loose, varicolored, fine gravel to 3/4 inches, grades to Poorly graded SAND (SP)				
			0.5							
40						**Lean CLAY (CL)** Soft, wet, reddish brown, very low plasticity				
						Clayey SAND (SC) Medium dense, wet, reddish brown, fine sand, trace to some silt				
	20	20	1.0							
45						BOTTOM OF BORING AT 44-1/2 FEET				

Station: 7+97 (meters)   Offset: -41 (meters:positive=east)   (603041.00/1870015.00)

Project: 95-973017NB.00	***URS Greiner Woodward Clyde***	Sheet 1 of 1	Fig. E-21

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT
Santa Clara County, California

Log of Boring: WB-03

Date Drilled: 5/11/98
Type of Boring: 6in Auger; 4-7/8in Rotary Wash
Hammer/drop (lb/in): 140lb/30in

Remarks: Augered to 17-1/2 feet, sampled, then began rotary wash; dry to 19 feet prior to rotary wash

Surface Elevation: 18.8 feet (approx.)

Depth, Feet	Samples	Blows/Ft	Pocket Pen. (tsf)	Torvane (ksf)	Graphic Log	MATERIAL DESCRIPTION	Moisture Content, %	Dry Density, pcf	Unconfined Compressive Strength, psf	Other Tests/ Remarks
	1	34	2.5			**Lean CLAY (CL) FILL** Very stiff, moist, brown with black (CH) mottling				
	2	45	>4.5			Hard, dry to moist, with gravel				
5	3	40	2.5			Very stiff, moist, less gravel	15	111	5700	
	4	400 600 psi	2.7			**Lean CLAY (CL) FILL** Very stiff, moist, brown with light tan mottling				
	5	38	2.7			Dark brown				
10							16	112		
	6	100 450 psi	>4.5				22	107		LL=49 PI=30
	7	36	3.0			FILL	21	108		
	8	28	2.0			**Lean CLAY (CL)** Stiff, moist, gray, with roots and wood	24	93	1770	
15	9	150 350 psi				**Lean CLAY (CL) with sand** Stiff, moist, dark gray and dark brown mottled, with fine sand	20	105		
	10	61	>4.5			Clayey SAND (SC) lens				
20	11	48	>4.5				18	110	8230	
	12	n/a	2.7				21 22	108 105		LL=35 PI=16
25	13	19	0.5	0.4		**Lean CLAY (CL)** Soft to medium, dark gray with black mottling	29	94	1560	
30	14	9	0.2	0.6		**Lean to fat CLAY (CL/CH)** Very soft, moist, dark gray With wood fragments	80	51	1380	
35	15	12				**Clayey SAND (SC)** Medium dense, dark gray, with wood fragments				
						Lean CLAY (CL) Soft, moist, dark gray				
40	16	9	0.7	0.7						
	17	10	0.5	0.5			35	86	990	
45						BOTTOM OF BORING AT 44-1/2 FEET				

Station: 8+40 (meters) Offset: -49 (meters:positive=east) (602640.00/1870196.00)

Project: 95-973017NB.00

URS Greiner Woodward Clyde

Sheet 1 of 1

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT
Santa Clara County, California

Log of Boring: WB-04

Date Drilled: 5/15/98
Type of Boring: 6in Auger; 4-7/8in Rotary Wash
Hammer/drop (lb/in): 140lb/30in

Remarks: Augered to 17 feet, then began rotary wash; dry prior to rotary wash
Surface Elevation: 19.7 feet (approx.)

Depth, Feet	Samples	Blows/Ft	Pocket Pen. (tsf)	Torvane (ksf)	Graphic Log	MATERIAL DESCRIPTION	Moisture Content, %	Dry Density, pcf	Unconfined Compressive Strength, psf	Other Tests/ Remarks
	1	33	>4.5			**Lean CLAY (CL) FILL** Hard, brown with some black mottling, some fine gravel lenses				
	2	39	>4.5				19	108	7540	
5	3	100 400 psi	4.0				17 17 16	111 112 117		
10	4	100 500 psi	4.5							
15	5	28	>4.5			Less plastic, dark brownish gray	15	109	9450	
						FILL				
20	6	8	0.7	0.3		**Lean CLAY (CL)** Medium to stiff, moist, dark grayish brown	32	89	1730	
	7	100 500 psi	2.0							
25	8	28	2.0			Stiff, brown with gray mottling	23	102	3730	
30	9	100 psi	1.5							
						Sand lens				
35	10	18	1.0			**Lean CLAY (CL)** Medium to stiff, brown with gray mottling				
40	11	20								
						Silty SAND (SM) to Sandy SILT (ML) Very dense, moist, brown				
	12	43								
45						BOTTOM OF BORING AT 44-1/2 FEET				

Station: 8+87 (meters)
Offset: -49 (meters:positive=east)
(602254.00/1870463.00)

Project: 95-973017NB.00

URS Greiner Woodward Clyde

Sheet 1 of 1

Fig. E-23

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT
Santa Clara County, California

Log of Boring: WB-05

Date Drilled: 5/11/98
Type of Boring: 6in Auger; 4-7/8in Rotary Wash
Hammer/drop (lb/in): 140lb/30in

Remarks: Augered to 17-1/2 feet, sampled, then began rotary wash; dry to 19 feet prior to rotary wash

Surface Elevation: 21.7 feet (approx.)

Depth, Feet	Samples	Blows/Ft	Pocket Pen. (tsf)	Torvane (ksf)	MATERIAL DESCRIPTION	Moisture Content, %	Dry Density, pcf	Unconfined Compressive Strength, psf	Other Tests/ Remarks
	1	28	3.5		**Lean CLAY (CL) FILL** Very stiff to hard, brown with some light brown lenses, some gravel layers				
	2	21	>4.5						
5	3	30	3.0			20	106	6140	
	4	500 psi	>4.5						
	5	38	3.5						
10	6	44	>4.5		With gravel FILL	15	117	8070	
	7	30	4.0		**Lean CLAY (CL) with gravel** Hard, dry to moist, brown, subangular gravel				
	8	100 220 psi	4.0						
15	9	24	2.5			19	106	2230	
	10	19	1.0						
	11	17	0.5	0.7	**Lean CLAY (CL)** Soft, moist, gray, with fine roots				
20	12	7	0		**Lean CLAY (CL)** Soft, moist, brown Silty SAND (SM) - Loose, wet, brown				
25	13	12	0		Soft, brown with reddish brown mottling	40	81	700	
30	14	100 200 psi	1.0		Medium, gray and brown mottled				
35	15	12	0.5	0.6	Medium to soft, with wood fragments				
40	16	7	0.2	0.6		67	58	990	
	17	12	1.0		Clayey SAND (SC) lens - Loose, moist, gray				
45					BOTTOM OF BORING AT 44-1/2 FEET				

Station: 9+61 (meters) Offset: -48 (meters:positive=east) (601787.00/1871039.00)

Project: 95-973017NB.00

URS Greiner Woodward Clyde

Sheet 1 of 1

Fig. E-24

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT
Santa Clara County, California

Log of Boring: WB-06

Date Drilled: 5/11/98

Type of Boring: 6in Auger; 4-7/8in Rotary Wash

Hammer/drop (lb/in): 140lb/30in

Remarks: Augered to 15 feet, sampled, then began rotary wash; dry to 16-1/2 feet prior to rotary wash

Surface Elevation: 23.7 feet (approx.)

Depth, Feet	Samples	Blows/Ft	Pocket Pen. (tsf)	Torvane (ksf)	Graphic Log	MATERIAL DESCRIPTION	Moisture Content, %	Dry Density, pcf	Unconfined Compressive Strength, psf	Other Tests/ Remarks
	1	8	1.5			**6 to 8 inches Poorly graded GRAVEL (GP-GC) with clay - FILL**				
	2	11	>4.5			**Sandy lean to fat CLAY (CL/CH) FILL** Hard, dry to moist, dark reddish brown, medium to high plasticity, trace to some fine to coarse sand, trace fine gravel				
	3	32	>4.5				22	106	6700	
5	4	28	>4.5			Moist				
	5	22	>4.5			Minor gravel layer 1 to 2 inches thick				
	6	63	>4.5							
10	7	59	>4.5			Dry to moist, increase in silt, decrease in sand and gravel				
	8	39	>4.5				14	117	9400	
	9	39	>4.5							
	10	17	1.5			**Lean CLAY (CL) FILL** Medium to stiff, moist, very dark brown, low to medium plasticity				
15	11	11	1.0			Becoming sandy (fine sand)	22	101	1970	
	12	5	1.2			Patches of sand				
	13	14				FILL				
20	14	22	2.0			**Fat CLAY (CH)** Moist, yellowish brown, high plasticity				
25						Decreased plasticity				
	15	21	0.2							
	16	11				**Silty SAND (SM)** Medium dense, wet, medium yellowish brown, fine sand				
						Lean CLAY (CL) Medium, moist, light brown, low to medium plasticity				
30	17	10	1.0				26	101	1270	
	18	13				**Clayey SAND (SC)** Medium dense, moist, fine sand, trace to some clay variable with depth				
35						**Fat CLAY (CH)** Medium, moist, brown, medium to high plasticity				
	19	17	0.7	0.6			31	90	2410	
40						**Poorly graded SAND (SP)** Medium dense, wet, dark greenish gray, fine to medium sand				
	20	21								
						Lean CLAY (CL) Medium, moist, dark brownish gray, medium plasticity				
45						BOTTOM OF BORING AT 43-1/2				

Station: 10+60 (meters) Offset: -50 (meters:positive=east) (601103.00/1871709.00)

Project: 95-973017NB.00

URS Greiner Woodward Clyde

Sheet 1 of 2

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT | **Log of Boring: WB-06** (continued)

Depth, Feet	Samples	Blows/Ft	Pocket Pen. (ksf)	Torvane (ksf)	Graphic Log	MATERIAL DESCRIPTION	Moisture Content, %	Dry Density, pcf	Unconfined Compressive Strength, psf	Other Tests/ Remarks
						FEET				
50										
55										
60										
65										
70										
75										
80										
85										
90										
95										

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT
Santa Clara County, California

Log of Boring: WB-07

Date Drilled: 5/8/98

Type of Boring: 6in Auger; 4-7/8in Rotary Wash

Hammer/drop (lb/in): 140lb/30in

Remarks: Augered to 19-1/2 feet, then began rotary wash; dry prior to rotary wash

Surface Elevation: 26.0 feet (approx.)

Depth, Feet	Samples	Blows/Ft	Pocket Pen. (tsf)	Torvane (ksf)	Graphic Log	MATERIAL DESCRIPTION	Moisture Content, %	Dry Density, pcf	Unconfined Compressive Strength, psf	Other Tests/ Remarks
	1	12				**8 inches Poorly graded GRAVEL (GP-GC) with clay - FILL**				
	2	18				**Clayey SAND (SC) FILL** Medium dense, dry, fine to coarse sand, trace fine gravel, moist after 1-1/2 feet				
	3	19								
5	4	16	2.5			**Lean CLAY (CL) FILL** Very stiff to hard, moist, dark reddish brown, medium to high plasticity, trace fine to coarse sand	15	113	8280	
	5	26	>4.5							
	6	45	>4.5							
10	7	51	>4.5							
	8	34	3.0							
	9	14	>4.5							
	10	10	0.7			Soft	26	92	1730	
15	11	11	1.0			Moist to wet, patches of fine sand FILL				
	12	12	1.0			**SILT (ML)** Medium, moist, gray with reddish brown staining, patches of sandy clay and clumps of sand				
	13	7	1.0							
20	14	5				**Lean CLAY (CL)** Very moist, dark brownish gray, medium plasticity				
	16	14	0.5			Medium, olive green, high plasticity	22	104	1530	
						Brown				
25										
	17	22	1.5			**Silty SAND (SM)** Medium dense, wet, medium yellowish brown, fine sand				
						Lean CLAY (CL) Medium, moist, yellowish brown, medium plasticity, trace fine to medium sand				
30										
	18	13	1.2			Silty SAND (SM) lens - Medium dense, wet, light brown				
35										
						Poorly graded SAND (SP-SM) with silt Medium dense, wet, light brown, fine sand				
	19	17								
	20	9	1.2							
						Lean CLAY (CL) Medium, moist, light brownish gray with reddish brown mottling, medium plasticity				
40										
	21	16	0.2	0.7		Olive green, medium to high plasticity	32	90	2190	
45						BOTTOM OF BORING AT 44-1/2 FEET				

Station: 11+79 (meters) Offset: -33 (meters:positive=east) (600394.00/1872385.00)

Project: 95-973017NB.00	**URS Greiner Woodward Clyde**	Sheet 1 of 1	Fig. E-26

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT
Santa Clara County, California

Log of Boring: WB-08

Date Drilled: 5/7/98

Remarks: Augered to 11 feet, sampled, then began rotary wash

Type of Boring: 6in Auger; 4-7/8in Rotary Wash

Hammer/drop (lb/in): 140lb/30in

Surface Elevation: 27.2 feet (approx.)

Depth, Feet	Samples	Blows/Ft	Pocket Pen. (tsf)	Torvane (ksf)	Graphic Log	MATERIAL DESCRIPTION	Moisture Content, %	Dry Density, pcf	Unconfined Compressive Strength, psf	Other Tests/ Remarks
						Lean CLAY (CL) FILL Hard to stiff, moist, brown, some burnt wood fragments				
	1	29	4.0							
	2	31	2.5				15	110	5950	
						SILT (ML) with sand - FILL Stiff, moist, brown				
5	3	22								
						Lean CLAY (CL) FILL Hard to medium, moist, brown				
	4	200 psi	>4.5							
	5	26	4.0							
10	6	34	3.0				18	109	12490	
	7	100 psi	1.5			FILL				
						Lean CLAY (CL) Medium, moist, brownish gray and brown mottled				
	8	11	0.7							
15		100				Soft				
	9	200 psi	1.0							Fluid loss, casing to 17'
	10	12	1.5							
20		100								No recovery
	11	175 psi								
		0				**Lean CLAY (CL)** Soft to medium, dark gray, trace sand				
	12	50 psi	1.0							
25	13	16	1.5	0.9			23	98	1540	
30						Increase in sand				
	14	6	1.0							
35	15	9				**Well-graded SAND (SW-SM) with silt and gravel** Loose, wet, dark gray More gravel				Lost circulation
40	16	10	2.0			**Lean CLAY (CL)** Medium, moist, brownish gray with reddish brown mottling				
	17	19	0.5				25	99	1980	
45						BOTTOM OF BORING AT 44-1/2 FEET				

Station: 12+20 (meters)   Offset: -39 (meters:positive=east)   (600018.00/1872478.00)

Project: 95-973017NB.00	**URS Greiner Woodward Clyde**	Sheet 1 of 1	Fig. E-27

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT
Santa Clara County, California

Log of Boring: WB-09

Date Drilled: 5/18/98
Type of Boring: 6in Auger; 4-7/8in Rotary Wash
Hammer/drop (lb/in): 140lb/30in

Remarks: Augered to 15 feet, sampled, then began rotary wash; dry to 16-1/2 feet prior to rotary wash

Surface Elevation: 27.5 feet (approx.)

Depth, Feet	Samples	Blows/Ft	Pocket Pen. (tsf)	Torvane (ksf)	Graphic Log	MATERIAL DESCRIPTION	Moisture Content, %	Dry Density, pcf	Unconfined Compressive Strength, psf	Other Tests/ Remarks
						Lean CLAY (CL) FILL Hard, dry to moist, brown				
	1	19	>4.5							
	2	16	2.5			← Concrete bits				
5	3	13				Less plastic	21	101	4610	
10	4	24	3.0				15	110	9760	
15						FILL				
	5	18	1.0			**Lean CLAY (CL)** Medium to stiff, moist, dark gray and brown	24	96	1790	
20	6	7	1.0				37	83	1310	
	7	11	1.0							
25	8	11	0.5							
						Lean CLAY (CL) Medium, moist, light gray				
						Well-graded GRAVEL (GW) with sand Black				
						Lean CLAY (CL) Stiff, moist, gray				
30	9	15	1.5							
35	10	17	1.0			Medium to stiff, light greenish gray	29	88	2180	
40	11	33	1.0							
	12	19	1.2							
45						BOTTOM OF BORING AT 44-1/2 FEET				

Station: 12+40 (meters)
Offset: -38 (meters:positive=east)
(599812.00/1872499.00)

Project: 95-973017NB.00

URS Greiner Woodward Clyde

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT
Santa Clara County, California

Log of Boring: WB-10

Date Drilled: 5/14/98
Type of Boring: 6in Auger; 4-7/8in Rotary Wash
Hammer/drop (lb/in): 140lb/30in

Remarks: Augered to 15 feet, then began rotary wash; dry prior to rotary wash

Surface Elevation: 27.9 feet (approx.)

Depth, Feet	Samples	Blows/Ft	Pocket Pen. (tsf)	Torvane (ksf)	MATERIAL DESCRIPTION	Moisture Content, %	Dry Density, pcf	Unconfined Compressive Strength, psf	Other Tests/ Remarks
	1	10	1.5		**6 inches Poorly graded GRAVEL (GP-GC) with clay - FILL**				0.0ppm 0-15'
	2	11	2.0		**Sandy lean to fat CLAY (CL/CH) with gravel - FILL** Soft to stiff, moist, reddish brown, low to high plasticity				
	3	7	2.5						
5	4	12			**Sandy SILT (ML) FILL** Stiff, moist, reddish brown, fine sand	19	104	2450	
					Sandy lean CLAY (CL) FILL Soft, moist, reddish brown, low plasticity, trace fine gravel				
10	5	8			**Clayey GRAVEL (GC) FILL** Loose, moist, some fine to coarse sand, fine gravel, wood fragments				
					Lean CLAY (CL) FILL Soft, moist, reddish brown, low plasticity, trace sand FILL				
15	6	9	1.2		**Lean to fat CLAY (CL/CH)** Medium, moist, brown, medium to high plasticity				
	7	16	1.0			29	95	3460	
	8	13	1.0		Light brownish gray mottled light gray, soft, medium plasticity				
20	9	19	1.0		**Sandy lean Clay (CL)** Medium, moist, olive green				
25	10	32			**Poorly graded SAND (SP)** Dense, wet, dark gray, fine to coarse sand to fine gravel				
	11	47							
30	12	54			**Poorly graded GRAVEL (GP-GC) with clay** Very dense, wet, dark brown, fine gravel				
35	13	25	1.2		**Lean to fat CLAY (CL/CH)** Stiff, moist, dark greenish gray, medium to high plasticity	27	97	3810	
40	14	41	2.5		Stiff to very stiff				
	15	16							No recovery
45					BOTTOM OF BORING AT 44-1/2 FEET				

Station: 12+70 (meters) Offset: -38 (meters:positive=east) (599540.00/1872664.00)

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT
Santa Clara County, California

Log of Boring: WB-11

Date Drilled: 5/14/98
Type of Boring: 6in Auger; 4-7/8in Rotary Wash
Hammer/drop (lb/in): 140lb/30in

Remarks: Augered to 10 feet, sampled, then began rotary wash; dry prior to rotary wash

Surface Elevation: 28.7 feet (approx.)

Depth, Feet	Samples	Blows/Ft	Pocket Pen. (tsf)	Torvane (ksf)	MATERIAL DESCRIPTION	Moisture Content, %	Dry Density, pcf	Unconfined Compressive Strength, psf	Other Tests/ Remarks
	1	6	2.0		**6 inches Poorly graded GRAVEL (GP-GC) with clay - FILL**				
	2	21	3.5		**Lean to fat CLAY (CL/CH) FILL** Medium, moist, dark brownish gray				
	3	22	>4.5		Stiff, trace fine sand and fine to coarse gravel to 1 inch				
5	4	23	>4.5		Decreased sand and gravel content	16	111	4650	
					Medium				
10	5	22	1.7						
					Lean CLAY (CL) FILL Soft, moist, reddish brown, low to medium plasticity FILL				
15	6	7	0.5						
	7	7	0.5		**Lean CLAY (CL)** Soft, moist, brown with reddish brown mottling	32	88	1050	
	8	14	2.0						
					Lean CLAY (CL) Stiff, moist, light brown, trace fine sand				
20									
25	9	16	1.5			12	117	3420	
	10	6			**Gravelly lean CLAY (CL)** Soft, wet, light brown, some sand and occasional sand lenses				
30	11	10	1.5		**Lean to fat CLAY (CL/CH)** Medium to stiff, moist, dark greenish gray, trace fine sand				
	12	13	2.2			26	98	1460	
35					Stiff				0.0ppm
	13	16							
					Olive green				
40									
	14	13	1.0						
					BOTTOM OF BORING AT 42-1/2 FEET				
45									

Station: 13+00 (meters) Offset: -39 (meters:positive=east) (599319.00/1872805.00)

Project: 95-973017NB.00 **URS Greiner Woodward Clyde** Sheet 1 of 1 Fig. E-30

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT
Santa Clara County, California

Log of Boring: WB-12

Date Drilled: 5/13/98
Type of Boring: 6in Auger; 4-7/8in Rotary Wash
Hammer/drop (lb/in): 140lb/30in

Remarks: Augered to 15 feet, sampled, then began rotary wash; dry to 16-1/2 feet prior to rotary wash

Surface Elevation: 29.1 feet (approx.)

Depth, Feet	Samples	Blows/Ft	Pocket Pen. (tsf)	Torvane (ksf)	Graphic Log	MATERIAL DESCRIPTION	Moisture Content, %	Dry Density, pcf	Unconfined Compressive Strength, psf	Other Tests/ Remarks
	1	19	3.2			**6 inches Poorly graded GRAVEL (GP-GC) with clay - FILL**				
	2	36	4.0			**Sandy lean CLAY (CL) FILL** Very stiff to hard, dry to moist, dark brown, occasional patches of sand	14	116	5250	
	3	17	3.7							
5	4	33	>4.5			**SILT (ML) with sand - FILL** Hard, moist, dark brown				
						Silty SAND (SM) FILL Loose, dry to moist, dark brown, fine to medium sand				
10	5	6				Grades to Poorly graded SAND (SP-SM) with silt				
						Grades to Well-graded SAND (SW) - Moist, dark brown, fine to coarse sand, trace fine gravel to 1/2 inch FILL				
15	6	6	1.0							
	7	8	0.7			**Lean CLAY (CL)** Medium, moist, reddish brown, medium plasticity, trace fine to coarse sand	26	97	1040	
	8	13	1.0							
20	9	12				**Lean CLAY (CL)** Medium, moist, light greenish gray				
						Silty SAND (SM) Medium dense, wet, grayish brown, trace silt Coarser sand				
25	10	15	1.2			**Lean CLAY (CL)** Soft to medium, moist, dark greenish gray, low to medium plasticity				
30	11	11	0.7			**Lean to fat CLAY (CL/CH)** Medium to hard, moist, gray	23	103	1260	
35	12	31	3.0			**Lean to fat CLAY (CL/CH)** Stiff,moist, light brown with reddish brown mottling, high plasticity				
40	13	19	1.5				29	94	2900	
						BOTTOM OF BORING AT 41-1/2 FEET				
45										

Station: 13+30 (meters) Offset: -38 (meters:positive=east) (599068.00/1872763.00)

Project: 95-973017NB.00 **URS Greiner Woodward Clyde** Sheet 1 of 1 Fig. E-31

4/20/00 GUADE GUADE

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT
Santa Clara County, California

Log of Boring: WB-13

Date Drilled: 5/6/98
Type of Boring: 6in Auger; 4-7/8in Rotary Wash
Hammer/drop (lb/in): 140lb/30in

Remarks: Augered to 19 feet, then began rotary wash

Surface Elevation: 29.8 feet (approx.)

Depth, Feet	Samples	Blows/Ft	Pocket Pen. (tsf)	Torvane (ksf)	Graphic Log	MATERIAL DESCRIPTION	Moisture Content, %	Dry Density, pcf	Unconfined Compressive Strength, psf	Other Tests/ Remarks
	1	43	>4.5			**Lean CLAY (CL) with gravel - FILL** Hard, moist, dark brown and brown mottled, gravel to 1/2 inches				
	2	41	3.5							
5	3	30	>4.5			**Lean CLAY (CL) FILL** Hard, moist, brown and light brown, trace fine gravel, with some fat clay (CH)	15	116	6720	
	4	58	>4.5							
	5	37	>4.5			**Lean CLAY (CL) FILL** Very stiff to hard, moist, dark gray, with occasional gravel to 1 inch				
	6	27	>4.5							
10	7	37	3.2			More plastic, some light gray streaks				
	8	42	2.2							
	9	31	2.5				14	117	1870	
15	10	23	1.7			With sand FILL				
	11	24	4.2							
	12	10				**Silty SAND (SM)** Loose, wet, black, organic Coarser sand to gravel				
20	13	5				Loose, dark gray with brown organic layers 1/8 to 1/4 inch thick				Excessive fluid loss, casing to 20'
						Redwood fragments and some occasional gravel to 2 inches				
25	14	15				**Silty SAND (SM) with gravel** Medium dense, wet, brownish gray **Silty SAND (SM)** Medium dense, wet, gray				
30	15	4	<0.5 <0.5 0.7			**Lean CLAY (CL)** Soft, moist, brownish gray **Lean CLAY (CL)** Soft, moist, gray Medium				
35	16	37	3.5			Stiff, with brown mottling	19	110	6330	
40	17	20	1.5			Medium, with reddish brown mottling, trace sand				
	18	18	1.5				23	102	1010	
45						BOTTOM OF BORING AT 44-1/2 FEET				

Station: 13+50 (meters)   Offset: -36 (meters:positive=east)   (598912.00/1872628.00)

Project: 95-973017NB.00

URS Greiner Woodward Clyde

Sheet 1 of 1

Fig. E-32

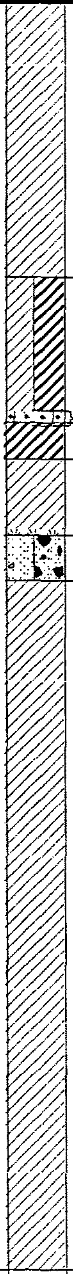
LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT
Santa Clara County, California

Log of Boring: WB-14

Date Drilled: 5/18/98
Type of Boring: 6in Auger; 4-7/8in Rotary Wash
Hammer/drop (lb/in): 140lb/30in

Remarks: Augered to 10 feet, sampled, then began rotary wash; dry to 11-1/2 feet prior to rotary wash

Surface Elevation: 35.8 feet (approx.)



Depth, Feet	Samples	Blows/Ft	Pocket Pen. (tsf)	Torvane (ksf)	Graphic Log	MATERIAL DESCRIPTION	Moisture Content, %	Dry Density, pcf	Unconfined Compressive Strength, psf	Other Tests/ Remarks
						Lean CLAY (CL) FILL Hard, moist, brown				
	1	64	>4.5							
	2	58	>4.5				12	119	15750	
5	3	40	>4.5							
						FILL				
10						**Lean to fat CLAY (CL/CH)** Very stiff, moist, grayish brown with some light brown mottling				
	4	19	3.5				30	89	3020	
	5	14	3.5							
						Silty SAND (SM) Lens - Brown				
	6	9	2.0			**Fat CLAY (CH)** Medium to stiff, moist, dark gray	22	98	870	
15	7	16	2.0			**Lean CLAY (CL)** Medium, moist, dark brown Wood				
	8	600 psi 200				**Sand and Gravel** Dense, wet, gray				
20	9	16	1.5			**Lean CLAY (CL)** Stiff, moist, light gray and reddish brown mottled				
25	10	11	1.0			Medium to stiff				
30	11	24	>4.5			Stiff, gray	20	109	2870	
35	12	6	1.0			Medium				
40	13	12	1.0				23	101	1000	
						BOTTOM OF BORING AT 41-1/2 FEET				
45										

Station: 14+29 (meters) Offset: -40 (meters:positive=east) (598248.00/1873015.00)

Project: 95-973017NB.00 | URS Greiner Woodward Clyde | Sheet 1 of 1 | Fig. E-33

4/20/00 GUADE GUADE

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT
Santa Clara County, California

Log of Boring: WB-15

Date Drilled: 5/5/98
Type of Boring: 6in Auger; 4-7/8in Rotary Wash
Hammer/drop (lb/in): 140lb/30in

Remarks: Augered to 20 feet, then began rotary wash with water
Surface Elevation: 43.8 feet (approx.)

Depth, Feet	Samples	Blows/Ft	Pocket Pen. (tsf)	Torvane (ksf)	Graphic Log	MATERIAL DESCRIPTION	Moisture Content, %	Dry Density, pcf	Unconfined Compressive Strength, psf	Other Tests/ Remarks
	1	32				**Lean CLAY (CL) with gravel - FILL** Very stiff to hard, dry to moist, brown, with asphalt				
	2	42	>4.5							No recovery
5	3	28	>4.5			**Lean CLAY (CL) FILL** Very stiff to hard, moist, brown				
	4	24	>4.5				25	97	5110	
	5	36	>4.5							
	6	55	>4.5							
10	7	52 100				Grades to Fat CLAY (CH) FILL	26	96	13890	
	8	200 psi	3.5			**Lean to fat CLAY (CL/CH)** Very stiff, moist, gray with reddish brown mottling				
15	9	33	3.2			Darker gray				
	10		1.7				32	86	4590	
20	11	20 100 120 psi				**Lean CLAY (CL)** Medium, moist, light brown with gray mottling ∇				
25	12	16	1.5			**Lean CLAY (CL)** Stiff, moist, gray reddish brown mottling	26	98	2960	
30	13	29	>4.5			**Sandy lean CLAY (CL)** Very stiff, moist, light brown, fine sand				
						Increase in sand				
35	14	60				**Well-graded GRAVEL (GW) with sand** Very dense, with multicolored gravel up to more than 2 inches				
40	15	41				Dense				
	16	18				**Lean CLAY (CL)** Medium, moist, brown; light to medium gray with depth				
45						BOTTOM OF BORING AT 44-1/2				

Station: 15+76 (meters) Offset: -35 (meters:positive=east) (597146.00/1873831.00)

Project: 95-973017NB.00

URS Greiner Woodward Clyde

Sheet 1 of 2

Fig. E-34

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT	Log of Boring: WB-15 (continued)

Depth, Feet	Samples	Blows/Ft	Pocket Pen. (ksf)	Torvane (ksf)	Graphic Log	MATERIAL DESCRIPTION	Moisture Content, %	Dry Density, pcf	Unconfined Compressive Strength, psf	Other Tests/ Remarks
						FEET				
50										
55										
60										
65										
70										
75										
80										
85										
90										
95										

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT
Santa Clara County, California

Log of Boring: WB-16

Date Drilled: 5/4/98
Type of Boring: 6in Auger; 4-7/8in Rotary Wash
Hammer/drop (lb/in): 140lb/30in

Remarks: Augered to 20 feet, sampled, then began rotary wash; dry to 21-1/2 feet prior to rotary wash

Surface Elevation: 55.7 feet (approx.)

Depth, Feet	Samples	Blows/Ft	Pocket Pen. (tsf)	Torvane (ksf)	MATERIAL DESCRIPTION	Moisture Content, %	Dry Density, pcf	Unconfined Compressive Strength, psf	Other Tests/ Remarks
	1	16	>4.5		**SILT (ML) FILL** Hard, moist, reddish brown, with some sand lenses	13	104	3050	
	2	9	>4.5						
5	3	21	>4.5			18	107	3970	
	4	29	>4.5		Increase in clay				
	5	27	>4.5		**Lean CLAY (CL) FILL** Hard, dry, dark brown with black mottling	12	103	5410	
	6	23	>4.5						
10	7	32	>4.5		**Sandy SILT (ML) FILL** Hard, dry, light brown	19	100	12300	
	8	35	>4.5		**Lean CLAY (CL)** Hard, dry, light brown FILL	22	100	15980	
	9	35	>4.5		**Lean CLAY (CL)** Hard, moist, gray with reddish brown and black mottling	25	95	8300	
15	10	48	>4.5			24	100	8890	
					Lean to fat CLAY (CL/CH) Hard, moist, gray and brown mottled				
20	11	27	2.5		Very stiff	27	97	6340	
25	12	15	1.5		Stiff ▼ 5/5/98	34	89	2410	
30	13	11	1.2		Grades to Lean CLAY (CL) - Medium	28	94	1140	
35	14	13	1.0			23	103	1450	
40	15	12	2.0		Trace sand	21	108	1240	
	16	9	0.7	0.7	Soft	25	100	850	
45					BOTTOM OF BORING AT 44-1/2 FEET				

Station: 16+75 (meters)   Offset: -38 (meters:positive=east)   (596425.00/1874444.00)

Project: 95-973017NB.00

URS Greiner Woodward Clyde

Sheet 1 of 1

Fig. E-35

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT
Santa Clara County, California

Log of Boring: WB-17

Date Drilled: 5/4/98
Type of Boring: 6in Auger; 4-7/8in Rotary Wash
Hammer/drop (lb/in): 140lb/30in

Remarks: Augered to 18-1/2 feet, sampled, then began rotary wash; dry to 20 feet prior to rotary wash
Surface Elevation: 59.8 feet (approx.)

Depth, Feet	Samples	Blows/Ft	Pocket Pen. (tsf)	Torvane (ksf)	Graphic Log	MATERIAL DESCRIPTION	Moisture Content, %	Dry Density, pcf	Unconfined Compressive Strength, psf	Other Tests/ Remarks
	1	44	>4.5			**Lean CLAY (CL) with gravel - FILL** Hard, dry to moist, brown with reddish brown mottling, gravel to 2 inches	14	115	13450	
	2	44	>4.5			FILL				
5	3	47	>4.5			With brick fragments	24	101	10430	
	4	43	>4.5			**Lean CLAY (CL)** Very stiff, moist, gray with black speckling	22	102	12240	
	5	13				**Gravelly fat CLAY (CH)** Hard, damp, brown with multicolored gravel				
10	6	21	>4.5							
	7	43				**Silty SAND (SM)** Medium dense, dry to moist, brown	21	101	16770	
	8	250 psi	>4.5			**Lean CLAY (CL)** Very stiff, dry to moist, dark brown				
15	9	40	>4.5			**Silty SAND (SM)** Medium dense, dry to moist, brown	20	104	9160	
	10	35	>4.5			**Lean CLAY (CL)** Hard, moist, dark brown	17	112	5800	
	11	29				**Lean CLAY (CL)** Hard, moist, gray				
20	12	22				**Fat CLAY (CH)** Hard, moist, black with light gray mottling				
	13	25					25	95		+#200=0 -#4=62%
	14	16				**Lean CLAY (CL)** Very stiff, moist, gray with brown mottling				
25	15	50 50 170 psi	0.7			**Silty SAND (SM)** Medium dense, moist, light brownish gray, some clay at 19 feet Grades to Sandy lean CLAY (CL) **Lean to fat CLAY (CL/CH)** Medium, moist, dark gray				
30	16	17	1.5				42	80	2670	
35	17	21	2.0				22	103	2770	
40						With brown mottling				
	18	20	2.7				27	97	2040	
	19	32	3.7			**Sandy SILT (ML)** Medium, moist, light brown with dark brown mottling	23	103	1790	
45						BOTTOM OF BORING AT 44-1/2 FEET				

Station: 17+30 (meters) Offset: -22 (meters:positive=east) (595958.00/1874735.00)

Project: 95-973017NB.00 **URS Greiner Woodward Clyde** Sheet 1 of 1 Fig. E-36

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT
Santa Clara County, California

Log of Boring: EB-01

Date Drilled: 5/5/98
Type of Boring: 152 mm Auger; 124 mm Rotary Wash
Hammer/drop: 623 N/760 mm

Remarks: Augered to 5.3 meters, sampled, then began rotary wash

Surface Elevation: 2.1 meters (approx.)

Depth, Meters	Samples	Blows/0.3m	Pocket Pen. (kPa)	Torvane (kPa)	Graphic Log	MATERIAL DESCRIPTION	Moisture Content, %	Dry Density, kN/m3	Unconfined Compressive Strength, kPa	Other Tests/ Remarks
						Poorly graded GRAVEL (GP-GC) with clay - FILL				
	1	28	>430			Cobbles to 102 mm				
1	2	37	>430			**Lean to fat CLAY (CL/CH) with sand - FILL** Hard, moist, dark greenish gray, fine to coarse sand, trace gravel	13	18.9	315	
	3	37	>430			Increase in gravel				
2	4	26								
	5	9	70			Alternating sand and gravel fill, brick pieces				
3	6	1380 3100 kPa	285			Dark brown				
	7	14	50			Increase in sand and gravel				
4	8	13	145			FILL				
	9	25	285			**Well-graded SAND (SW-SC) with clay and gravel**				
5	10	57				Very dense, wet, dark greenish gray, fine to coarse sand				
	11	60								
6						Decrease in gravel				
	12	14	95			**Fat CLAY (CH)** Medium, moist, dark brownish gray, very high plasticity				
7	13	1380 2070 kPa	120				25	15.8		
8	14	1710 3450 kPa	50							
9										
10	15	30				**Lean CLAY (CL)** Stiff, moist, brown, some sand	18	17.9	204	
11										
	16	32				**Poorly graded SAND (SP)** Dense, wet, dark brown, fine sand				
12	17	34								
13										
	18	32	215			**Lean to fat CLAY (CL/CH)** Very stiff, moist, brown mottled light gray, medium to high plasticity				
14						BOTTOM OF BORING AT 13.6 METERS				
15										

Station: 6+23 (meters)   Offset: 87 (meters:positive=east)   (604119.00/1868979.00)

Project: 95-973017NB.00

URS Greiner Woodward Clyde

Sheet 1 of 1

Fig. E-37

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT
Santa Clara County, California

Log of Boring: EB-02

Date Drilled: 5/6/98
Type of Boring: 152 mm Auger; 124 mm Rotary Wash
Hammer/drop: 623 N/760 mm

Remarks: Augered to 3.7 meters, sampled, then began rotary wash

Surface Elevation: 4.5 meters (approx.)

Depth, Meters	Samples	Blows/0.3m	Pocket Pen. (kPa)	Torvane (kPa)	Graphic Log	MATERIAL DESCRIPTION	Moisture Content, %	Dry Density, kN/m3	Unconfined Compressive Strength, kPa	Other Tests/ Remarks
	1	31	>430			**25 to 51 mm Poorly graded GRAVEL (GP-GC) with clay - FILL**				
	2	32	145			**Lean to fat CLAY (CL/CH) FILL**	14	17.8	340	
1	3	26	145			Very stiff, dry, dark reddish brown, trace to some fine to coarse sand, medium to high plasticity				
	4	31	>430			Dry to moist Dark brown	17	17.6	420	
2	5	27	385							
	6	16	240			Stiff	19	17.1	145	
3	7	28	285							
	8	19	145			Stiff, moist, brown FILL ∇				
4	9	8	120			**Fat CLAY (CH)** Medium, moist, brownish gray				
	10	3	95				55	10.3	46	
5	11	5	70							
	12	1040 1780 kPa	145				22	16.2		
6	13	16	140							
7										
8	14	8	50			Organic odor	52	10.6	48	
9	15	7	50							
10										
11	16	10	<50							
						Clayey GRAVEL (GC) Loose, wet, dark gray, trace fine to coarse sand, gravel to 19 mm				
12	17	6				**Lean to fat CLAY (CL/CH)**				
	18	11	50			Stiff, moist to wet, olive green	35	13.5	123	
13	19	9	<50			**Silty clayey SAND (SC-SM)** Loose, wet, dark gray, fine sand				
14						**Lean CLAY (CL)** Very soft, moist to wet, dark gray, low to medium plasticity BOTTOM OF BORING AT 13.6				
15										

Station: 7+50 (meters) Offset: 74 (meters:positive=east) (603434.00/1869750.00)

Project: 95-973017NB.00

URS Greiner Woodward Clyde

Sheet 1 of 2

Fig. E-38

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT	Log of Boring: EB-02 (continued)

Depth, Meters	Samples	Blows/0.3m	Pocket Pen. (kPa)	Torvane (kPa)	Graphic Log	MATERIAL DESCRIPTION	Moisture Content, %	Dry Density, kN/m3	Unconfined Compressive Strength, kPa	Other Tests/ Remarks
						METERS				
16										
17										
18										
19										
20										
21										
22										
23										
24										
25										
26										
27										
28										
29										
30										
31										

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT
Santa Clara County, California

Log of Boring: EB-03

Date Drilled: 5/7/98
Type of Boring: 152 mm Auger; 124 mm Rotary Wash
Hammer/drop: 623 N/760 mm

Remarks: Augered to 4.1 meters, sampled, then began rotary wash; dry to 4.9 meters prior to rotary wash

Surface Elevation: 4.9 meters (approx.)

Depth, Meters	Samples	Blows/0.3m	Pocket Pen. (kPa)	Torvane (kPa)	Graphic Log	MATERIAL DESCRIPTION	Moisture Content, %	Dry Density, kN/m3	Unconfined Compressive Strength, kPa	Other Tests/ Remarks
	1	50>	430			**25 to 51 mm Poorly graded GRAVEL (GP-GC) with clay - FILL**				
	2	29	240			**Lean to fat CLAY (CL/CH) FILL**				
1	3	28	335			Very stiff, dry to moist, brown, trace to some fine to coarse sand, trace sand, medium to high plasticity				
	4	34	405							
2	5	21	240			Dark brown	22	16.6	228	
	6	33	385			Increase in plasticity				
3	7	28	240			Lean CLAY (CL) - Stiff, brown				
	8	14	120			Dark brown				
4	9	10	120			FILL				
	10	5	<50			**Lean to fat CLAY (CL/CH)** Medium, moist, dark brown, medium to high plasticity, iron oxide mottled	31	14.4	66	
5	11	14	215							
	12	21				Reddish brown				
		1380				Dark brownish gray				
6	13	3095 kPa								
	14	15	215							
7										
8	15	18	120				24	15.8	141	
9										
	16	6	<50			**Silty SAND (SM)** Loose, saturated, olive green, fine to coarse sand, alternating sand and clay layers 76 to 102 mm thick at 9.6 to 10.1 meters				
10	17	7	95							
						Lean to fat CLAY (CL/CH) Soft, moist, olive green, medium to high plasticity				
11	18	12								
						Silty SAND (SM) Medium dense, wet, olive green, fine to medium sand				
12										
	19	25	50			**Lean CLAY (CL)** Soft, moist, olive green, medium plasticity				
13										
	20	14	<50			**Silty SAND (SM)** Medium dense, wet, fine to coarse sand	31	14.4	47	
14						**Lean CLAY (CL)** Moist, dark grayish brown, medium to high plasticity				
						BOTTOM OF BORING AT 13.6 METERS				
15										

Station: 7+79 (meters)
Offset: 46 (meters:positive=east)
(603239.00/1870010.00)

Project: 95-973017NB.00

URS Greiner Woodward Clyde

Sheet 1 of 1

Fig. E-39

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT
Santa Clara County, California

Log of Boring: EB-04

Date Drilled: 5/15/98
Type of Boring: 152 mm Auger; 124 mm Rotary Wash
Hammer/drop: 623 N/760 mm

Remarks: Augered to 4.6 meters, then began rotary wash; dry prior to rotary wash. Installed observation well

Surface Elevation: 5.1 meters (approx.)

Depth, Meters	Samples	Blows/0.3m	Pocket Pen. (kPa)	Torvane (kPa)	Graphic Log	MATERIAL DESCRIPTION	Moisture Content, %	Dry Density, kN/m3	Unconfined Compressive Strength, kPa	Other Tests/ Remarks
	1	13	360			**152 mm Poorly graded GRAVEL (GP-GC) with clay - FILL**				
	2	52>	430			**Lean CLAY (CL) FILL**				
1	3	28>	430			Very stiff, dry to moist, reddish brown, medium plasticity, trace fine to coarse sand				
	4	26	190			Patches of fine sand Stiff, moist, decrease in sand content	20	16.6	200	
2										
3						Dark brown				
	5	17	240			Refuse - glass, wood, etc., to 4.6 meters				
4										
	6	13	190				29	14.6	117	
5										
6										
	7	13								No recovery
7	8	9	50			Soft, wet, dark brown; glass, wood, mixed refuse				
8	9	13								No recovery
	10	12	95							
9						FILL				
	11	13				**Lean CLAY (CL) with gravel** Soft, moist, dark brown				
10	12	9								No recovery
	13	7								
11	14	22				**Silty SAND (SM) with gravel** Medium dense, wet, dark gray, fine to coarse sand, trace to some fine gravel				
	15	18								
	16	9				**Sandy lean CLAY (CL)** Soft, moist, gray, fine sand				
12										
		1240								
13	17						25	15.8		
		1515 kPa								
	18	34				**Clayey SAND (SC)** Dense, wet, dark gray, fine sand				
14						BOTTOM OF BORING AT 13.9 METERS				
15										

Station: 7+95 (meters)   Offset: 43 (meters:positive=east)   (603083.00/1870090.00)

Project: 95-973017NB.00	***URS Greiner Woodward Clyde***	Sheet 1 of 1	Fig. E-40

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT
Santa Clara County, California

Log of Boring: EB-05

Date Drilled: 5/15/98
Type of Boring: 124 mm Rotary Wash
Hammer/drop: 623 N/760 mm

Remarks: Installed observation well; see well log for details

Surface Elevation: 5.2 meters (approx.)

Depth, Meters	Samples	Blows/0.3m	Pocket Pen. (kPa)	Torvane (kPa)	MATERIAL DESCRIPTION	Moisture Content, %	Dry Density, kN/m3	Unconfined Compressive Strength, kPa	Other Tests/ Remarks
0					**152 mm Poorly graded GRAVEL (GP-GC) with clay - FILL**				
0.5					**Lean to fat CLAY (CL/CH) FILL** Soft, dry, reddish brown, trace to some fine to coarse sand				
2.5					Medium, dark brown				
3.7					Soft, grayish brown				
4					Refuse - glass, wood, etc.				
5.6	1	9	95		Medium, moist, dark brownish gray, refuse in sample				
7.6					FILL				
7.6					**Sandy lean CLAY (CL)** Soft, moist, dark greenish gray, low plasticity, trace fine sand and fine gravel				
8.5					**Lean CLAY (CL)** Very soft, moist, black, low plasticity				
9.2	2	14							No recovery
9.7	3	9	50	19					
11					BOTTOM OF BORING AT 11.0 METERS				

Station: 7+96 (meters)   Offset: 45 (meters:positive=east)   (603073.00/1870095.00)

Project: 95-973017NB.00

URS Greiner Woodward Clyde

Sheet 1 of 1

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT
Santa Clara County, California

Log of Boring: EB-06

Date Drilled: 5/19/98

Type of Boring: 124 mm Rotary Wash

Hammer/drop: 623 N/760 mm

Remarks: Installed observation well; see well log for details

Surface Elevation: 5.2 meters (approx.)

Depth, Meters	Samples	Blows/0.3m	Pocket Pen. (kPa)	Torvane (kPa)	Graphic Log	MATERIAL DESCRIPTION	Moisture Content, %	Dry Density, kN/m3	Unconfined Compressive Strength, kPa	Other Tests/ Remarks
						Lean CLAY (CL) with gravel - FILL Very stiff to hard, moist, brown, decreasing gravel with depth				
1										
2										
3										
						With wood				
4										
						Some glass fragments				
5						**Lean CLAY (CL) - FILL** Medium, moist, gray				
6										
7										
8										
		345								
	1					Copper wire and metal				
9										
		690 kPa				BOTTOM OF BORING AT 9.1 METERS				
10										
11										
12										
13										
14										
15										

Station: 7+97 (meters)　Offset: 45 (meters:positive=east)　(603062.00/1870098.00)

Project: 95-973017NB.00

URS Greiner Woodward Clyde

Sheet 1 of 1

Fig. E-42

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT
Santa Clara County, California

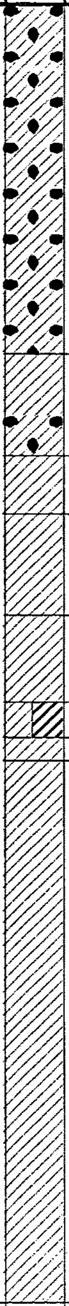
Log of Boring: EB-07

Date Drilled: 5/8/98
Type of Boring: 152 mm Auger; 124 mm Rotary Wash
Hammer/drop: 623 N/760 mm

Remarks: Augered to 5.2 meters, sampled, then began rotary wash; dry to 5.8 meters prior to rotary wash

Surface Elevation: 5.0 meters (approx.)

Samples	Blows/0.3m	Pocket Pen. (kPa)	Torvane (kPa)	Moisture Content, %	Dry Density, kN/m3	Unconfined Compressive Strength, kPa	Other Tests/ Remarks
1	62	>430					
2	52	>430					
3	73	>430					
4	34	>430		15	17.6	504	
5	39	>430					
6	46	>430					
7	46	>430					
8	22	360					
9	31	335					
10	16	265		26	15.1	134	
11	36	240					
12	18	190					
13	25	190		25	15.9	125	
14	32	170					
15	16	145					
16	11	70		34	13.9	79	
17	12	95	34				
18	8	120					
19	6	120					



MATERIAL DESCRIPTION

Lean CLAY (CL) with gravel - FILL
Hard, moist, dark brown
Damp

Lean CLAY (CL) FILL
Very stiff to hard, moist, dark gray, trace glass
Brown and gray, with gravel
FILL

Lean CLAY (CL)
Medium to stiff, moist, brown with orange brown mottling

Lean CLAY (CL)
Stiff, moist, dark gray with some brown mottling, occasional gravel

Lean CLAY (CL)
Medium to stiff, moist, light gray with orange brown mottling

Lean to fat CLAY (CL/CH)
Soft, moist, black, with burnt wood and oil-type sheen

Lean CLAY (CL)
Soft, moist, gray with black mottling

Lean CLAY (CL)
Medium, moist, gray
With brown mottling
With wood fragments

BOTTOM OF BORING AT 13.6 METERS

Station: 8+12 (meters)
Offset: 44 (meters:positive=east)
(602918.00/1870130.00)

Project: 95-973017NB.00

URS Greiner Woodward Clyde

Sheet 1 of 1

Fig. E-43

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT
Santa Clara County, California

Log of Boring: EB-08

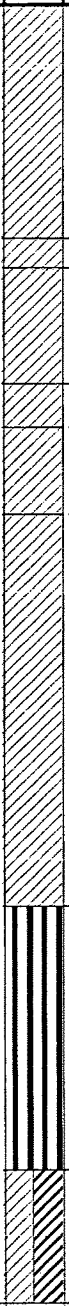
Date Drilled: 5/15/98

Type of Boring: 152 mm Auger; 124 mm Rotary Wash

Hammer/drop: 623 N/760 mm

Remarks: Augered to 5.5 meters, then began rotary wash; dry prior to rotary wash

Surface Elevation: 5.6 meters (approx.)



Depth, Meters	Samples	Blows/0.3m	Pocket Pen. (kPa)	Torvane (kPa)	MATERIAL DESCRIPTION	Moisture Content, %	Dry Density, kN/m3	Unconfined Compressive Strength, kPa	Other Tests/ Remarks
	1	35			**Lean CLAY (CL) FILL** Hard, moist, brown				
	2	65	>430						
	3	48	>430			17	17.5	668	
					Lean CLAY (CL) FILL Moist, dark gray				
	4	56	385		**Lean CLAY (CL) FILL** Hard, moist, brown with dark gray mottling	14	18.3	596	
					Lean CLAY (CL) FILL Well compacted, multicolored (gray, brown, light brown)				
	5	50	>430		**Lean CLAY (CL) FILL** Well compacted, moist, dark grayish brown, with wood, fine gravel FILL				
	6	23	335						
	7	14	95		**Lean CLAY (CL)** Stiff, moist, dark brown Medium, gray	25	15.8	139	
	8	7	95		Medium to soft, dark gray, some sand				
	9	10	95		**Elastic SILT (MH)** Medium, moist, dark gray, with wood fragments	36	13.2	39	
	10	7							
	11	8	0	19	**Lean to fat CLAY (CL/CH)** Soft, moist, gray with black mottling	67	9.0	46	
	12	7	50	29					
					BOTTOM OF BORING AT 13.6 METERS				

Station: 8+33 (meters) Offset: 48 (meters:positive=east) (602753.00/1870235.00)

Project: 95-973017NB.00 **URS Greiner Woodward Clyde** Sheet 1 of 1 Fig. E-44

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT
Santa Clara County, California

Log of Boring: EB-09

Date Drilled: 5/12/98
Type of Boring: 152 mm Auger; 124 mm Rotary Wash
Hammer/drop: 623 N/760 mm

Remarks: Augered to 4.9 meters, sampled, then began rotary wash; dry to 5.6 meters prior to rotary wash

Surface Elevation: 6.6 meters (approx.)

Depth, Meters	Samples	Blows/0.3m	Pocket Pen. (kPa)	Torvane (kPa)	MATERIAL DESCRIPTION	Moisture Content, %	Dry Density, kN/m3	Unconfined Compressive Strength, kPa	Other Tests/ Remarks
	1	29	430		**Lean CLAY (CL) with sand - FILL** Hard, moist, brown, with sand and some gravel				
1	2	17	>430			10	19.7	112	
	3	3450 kPa	>430						
2	4	55	>430						
	5	47	>430		**Lean CLAY (CL) FILL** Hard, moist, dark gray	25	15.4	361	
3	6	1380 2760 kPa	>430			17	17.1		
					With roots and wood	19	17.1		LL=36 PI=16
	7	27	430		FILL				
4					Dark gray with brown, with gravel				
	8	37	335		**Lean CLAY (CL)** Stiff, moist, brown	26	15.4	276	
	9	44	285						
5		830			With fine roots	21	16.0		
	10		145			56	14.5		LL=35 PI=14
		2895 kPa			**Lean CLAY (CL)** Medium to stiff, moist, brown	28	14.8		
6									
	11	3	0	10	**Lean CLAY (CL)** Soft, moist, gray and brown mottled	30	14.2	30	
7									
8	12	345 690 kPa	50						
9									
	13	9	0	29	Grayer	31	14.5	82	
10					**Lean CLAY (CL)** Soft, moist, gray, with occasional sand and some black wood fragments				
11	14	7	50	34					
12									
	15	8		34		48	11.0	46	
13	16	8		14					
14					BOTTOM OF BORING AT 13.6 METERS				
15									

Station: 9+55 (meters) Offset: 44 (meters:positive=east) (601896.00/1871026.00)

Project: 95-973017NB.00 **URS Greiner Woodward Clyde** Sheet 1 of 1 Fig. E-45

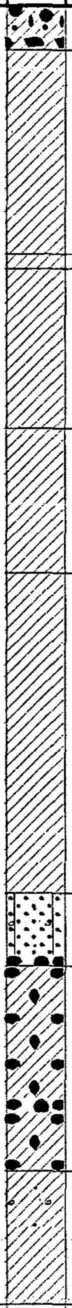
LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT
Santa Clara County, California

Log of Boring: EB-10

Date Drilled: 5/14/98
Type of Boring: 152 mm Auger; 124 mm Rotary Wash
Hammer/drop: 623 N/760 mm

Remarks: Augered to 5.0 meters, sampled, then began rotary wash; dry to 5.8 meters prior to rotary wash

Surface Elevation: 6.9 meters (approx.)



Samples	Blows/0.3m	Pocket Pen. (kPa)	Torvane (kPa)	MATERIAL DESCRIPTION	Moisture Content, %	Dry Density, kN/m3	Unconfined Compressive Strength, kPa	Other Tests/ Remarks
				Gravelly lean CLAY (CL) FILL Hard, moist, reddish brown and gray mottled				
1	25	>430						
				Lean CLAY (CL) FILL Very stiff to hard, moist, gray with dark brown mottling				
2	25	>430						
3	28	285			19	17.0	238	
				Lean CLAY (CL) FILL Very stiff, moist, dark gray				
				Lean CLAY (CL) FILL Hard, moist, dark brown				
4	31	>430						
5	21	145		Stiff	16	17.2	218	
				FILL				
				Sandy lean CLAY (CL) Medium, moist, brown				
6	12	95			22	15.0	38	
7	345 690 kPa	95			36	13.4		
				Lean CLAY (CL) Medium, moist, gray				
8	16	95			37	12.8	65	
9	39	285						
				Silty SAND (SM) Dense, brown				
10	33			Gravel lens				
				Lean CLAY (CL) Medium to stiff, moist, brown with gray mottling; some soft, gray gravel chunks over 13 mm				
11	30	95			25	15.9	137	
				Dark gray gravel lens, gravel to 19 mm				
				Lean CLAY (CL) Medium, moist, gray with brown mottling; with intermittent sand (SP-SM) lenses				
12	41							
13	26	95		Gray, no sand				
				BOTTOM OF BORING AT 13.6 METERS				

Station: 10+85 (meters) Offset: 42 (meters:positive=east) (601033.00/1871964.00)

Project: 95-973017NB.00

URS Greiner Woodward Clyde

Sheet 1 of 1

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT
Santa Clara County, California

Log of Boring: EB-11

Date Drilled: 5/7/98
Type of Boring: 124 mm Rotary Wash
Hammer/drop: 623 N/760 mm

Remarks: Augered to 5.3 meters, sampled, then began rotary wash

Surface Elevation: 7.0 meters (approx.)

Depth, Meters	Samples	Blows/0.3m	Pocket Pen. (kPa)	Torvane (kPa)	MATERIAL DESCRIPTION	Moisture Content, %	Dry Density, kN/m3	Unconfined Compressive Strength, kPa	Other Tests/ Remarks
	1	14	190		**Gravelly lean CLAY (CL) FILL** Very stiff, moist, brown to red brown				
1	2	25	240		**Lean CLAY (CL) FILL** Very stiff, moist, dark brown	20	16.7	129	
	3	1035 3105 kPa (ref)	>4.5		With fine gravel				
2	4	64	>4.5		**Lean CLAY (CL) FILL** Hard, dry to moist, gray brown				
	5	45	3.7						
3	6	37	>4.5		With dark gravels				
	7	37	>4.5			15	17.6	403	
						17	13.3		
4	8	1380 kPa			FILL	17	15.4		LL=23
	9	31			**Silty SAND (SM)** Dense, wet, brown, increasing fines content with depth	18	16.6		PI=1
5	10	12			**Sandy SILT (ML) to Silty SAND (SM)** Medium dense, moist, brown				
	11		2.0		▽	24			+#4=0 -#200=41% -5micr=11%
6									
	12	10	0.5		**Clayey SAND (SC)** Medium dense, gray, with fine roots	26	14.8		+#4=0 -#200=28%
7					Less fines				
					Silty clayey SAND (SC-SM) Dark gray				
8	13	13			**Sandy lean CLAY (CL)** Dark gray				
9					**Silty clayey SAND (SC-SM)** Medium dense, moist, dark gray Increase in fines				
	14	3			**fine Sandy SILT (ML)** Soft, moist, dark gray				
10					**Lean CLAY (CL)** Soft, moist, dark gray Increase in sand				
11	15	5		14	**Sandy lean CLAY (CL)** Soft, gray to dark gray, with wood	64	9.0	44	
					Increase in sand				
12									
	16	9	1.7		**Silty clayey SAND (SC-SM) with gravel** Gravel to 6 mm				
13					**Lean CLAY (CL)** Medium, gray with brown mottling				
	17	33	1.0		**Lean CLAY (CL)** Medium, moist, brown	27	15.3	145	
14					BOTTOM OF BORING AT 13.6 METERS				
15									

Station: 11+29 (meters) Offset: 42 (meters:positive=east) (600908.00/1872392.00)

4/20/00 GUADM GUADM

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT
Santa Clara County, California

Log of Boring: EB-12

Date Drilled: 5/12/98

Type of Boring: 152 mm Auger; 124 mm Rotary Wash

Hammer/drop: 623 N/760 mm

Remarks: Augered to 6.1 meters, then began rotary wash; dry prior to rotary wash

Surface Elevation: 7.4 meters (approx.)

Depth, Meters	Samples	Blows/0.3m	Pocket Pen. (kPa)	Torvane (kPa)	MATERIAL DESCRIPTION	Moisture Content, %	Dry Density, kN/m3	Unconfined Compressive Strength, kPa	Other Tests/ Remarks
	1	18	240		**Lean CLAY (CL) FILL** Stiff to hard, moist, brown, with gravel lenses				
1	2	34	>430			17	18.0	542	
	3	46	430						
2	4	53	385						
	5	37							
	6	23	285		**Lean CLAY (CL) FILL** Stiff to very stiff, gray with orange brown mottling, grass blades and stems				
3	7	26							
	8	29			With some gravel FILL	22	16.3	156	
4	9	17	240		**Lean CLAY (CL)** Stiff, moist, gray and brown mottled, with shells	22	15.8	119	
	10	15							
5	11	26	170		Dark gray				
	12	26	285		**Lean CLAY (CL)** Medium, gray brown with light gray mottling				
6	13	50	385		**Lean CLAY (CL)** Very stiff, moist, light yellowish brown	19	17.4	309	
7					Increase in sand				
8	14	18			**Silty SAND (SM)** Dense, brown				
					Lean CLAY (CL) Stiff, moist, light tan and yellow brown				
9	15	21	145						
10					**Lean CLAY (CL)** Soft, moist, reddish brown with gray mottling				
11	16	15	95	34	Soft	31	14.5	80	
12	17	26			**Silty SAND (SM)** Medium dense, wet, brownish gray				
13					BOTTOM OF BORING AT 12.7 METERS				
14									
15									

Station: 11+50 (meters) Offset: 43 (meters:positive=east) (600683.00/1872382.00)

Project: 95-973017NB.00

URS Greiner Woodward Clyde

Sheet 1 of 1

Fig. E-48

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT
Santa Clara County, California

Log of Boring: EB-13

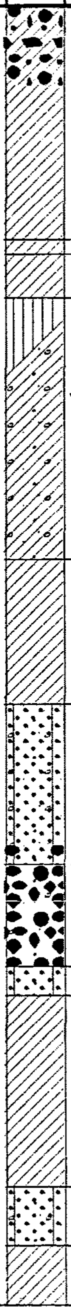
Date Drilled: 5/14/98

Type of Boring: 152 mm Auger; 124 mm Rotary Wash

Hammer/drop: 623 N/760 mm

Remarks: Augered to 3.7 meters, sampled, then began rotary wash; dry to 4.0 meters prior to rotary wash

Surface Elevation: 8.5 meters (approx.)



Depth, Meters	Samples	Blows/0.3m	Pocket Pen. (kPa)	Torvane (kPa)	MATERIAL DESCRIPTION	Moisture Content, %	Dry Density, kN/m3	Unconfined Compressive Strength, kPa	Other Tests/ Remarks
					Lean CLAY (CL) with gravel - FILL Hard, moist, brown, trace sand				
	1	48	>430						
1	2	52	>430		No gravel				
	3	48	>430			14	18.5	655	
2									
					Lean CLAY (CL) FILL Very stiff, moist, dark gray, with wood				
3					**Lean CLAY (CL) FILL** Very stiff, brown, increase in silt with depth				
	4	16	265			13	16.7	81	
4	5	10	145		FILL				
	6	12	50	19	**SILT (ML)** Medium to stiff, moist, brown, increase in sand with depth	28	14.7	82	
5					Grades to Lean CLAY (CL) with sand - Soft to medium, moist, brown				
6					**Lean CLAY (CL)** Stiff, moist, brown with gray mottling				
	7	16	265			23	16.0	111	
7									
					Silty SAND (SM) Dense, wet, brown to dark brown				
8	8	33							
9					With gravels				
					Poorly graded GRAVEL (GP) with sand Dense, wet, dark gray brown				
	9	37							
10					**Silty SAND (SM)** Medium dense, wet, dark gray				
11	10	14	240		**Lean CLAY (CL)** Medium to stiff, moist, gray	26	15.5	93	
12									
	11	49			**Silty SAND (SM)** Dense, moist, brown				
13					**Lean CLAY (CL)** Very stiff, moist, dark brownish gray, with occasional gravel				
	12	29	215			21	16.6	277	
14					BOTTOM OF BORING AT 13.6 METERS				
15									

Station: 12+80 (meters)   Offset: 80 (meters:positive=east)   (599556.00/1872821.00)

Project: 95-973017NB.00 | **URS Greiner Woodward Clyde** | Sheet 1 of 1 | Fig. E-49

4/20/00 GUADM GUADM

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT
Santa Clara County, California

Log of Boring: EB-14

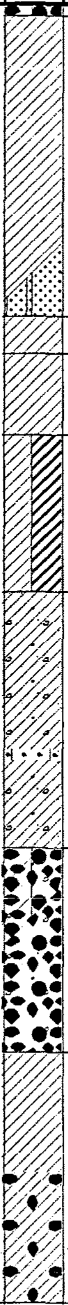
Date Drilled: 5/12/98
Type of Boring: 152 mm Auger; 124 mm Rotary Wash
Hammer/drop: 623 N/760 mm

Remarks: Augered to 4.9 meters, then began rotary wash; dry prior to rotary wash

Surface Elevation: 8.6 meters (approx.)

Samples	Blows/0.3m	Pocket Pen. (kPa)	Torvane (kPa)	Moisture Content, %	Dry Density, kN/m3	Unconfined Compressive Strength, kPa	Other Tests/ Remarks
1	8	95					
2	25	>430					
3	37	>430		22	16.6	328	
4	44	430					
5	1380 3530 kPa	>430					
6	1380 2870 kPa						
7	22	285					
8	16	145		24	15.3	178	
9	1380 3035 kPa	240					
10	18	145		28	15.0	211	
11	1380 2760 kPa			35	13.7		
12	11	120		25	15.7	53	
13	9	<50	19				
14	23						
15	57						
16	21	95					
17	26	70		34	13.6	66	
18	25	145					

Depth, Meters: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15



MATERIAL DESCRIPTION

102 to 152 mm Poorly graded GRAVEL (GP-GC) with clay - FILL

Lean CLAY (CL) FILL
Hard, moist, dark brown, medium plasticity, trace sand
Dry, trace fine sand
Dark grayish brown

Poorly graded SAND (SP-SM) with silt - FILL
Dense, brown, fine sand, trace silt

FILL

Lean CLAY (CL) FILL
Very stiff, moist, dark brown

Lean CLAY (CL)
Stiff, moist, dark reddish brown, medium plasticity

Fat CLAY (CH)
Stiff to very stiff, moist, dark brown, medium to high plasticity

Lean CLAY (CL)
Medium to stiff, moist, light brownish gray, medium plasticity, trace to some fine to medium sand
Silty SAND (SM) lens
Light greenish gray, trace fine gravel

Poorly graded GRAVEL (GP-GC) with clay and sand
Medium dense to dense, fine to coarse sand, fine to coarse gravel to 25 mm, trace silt
Grades to Poorly graded GRAVEL (GP) with sand

Lean CLAY (CL)
Medium, moist, light greenish gray, medium plasticity
Some coarse gravel to 25 mm
Stiff

BOTTOM OF BORING AT 13.6 METERS

Station: 13+60 (meters)
Offset: 55 (meters:positive=east)
(598802.00/1872690.00)

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT
Santa Clara County, California

Log of Boring: EB-15

Date Drilled: 5/13/98
Type of Boring: 152 mm Auger; 124 mm Rotary Wash
Hammer/drop: 623 N/760 mm

Remarks: Augered to 1.7 meters, then began rotary wash; dry prior to rotary wash

Surface Elevation: 9.9 meters (approx.)

Samples	Blows/0.3m	Pocket Pen. (kPa)	Torvane (kPa)	MATERIAL DESCRIPTION	Moisture Content, %	Dry Density, kN/m3	Unconfined Compressive Strength, kPa	Other Tests/ Remarks
				Lean CLAY (CL) with gravel - FILL Medium, moist, brown				
1	28	240						
2	28	385		**Lean CLAY (CL) FILL** Very stiff, moist, dark brown	15	17.9	511	
3	46	240		**Lean CLAY (CL) FILL** Stiff to hard, moist, brown, trace gravel				
4	14	190		Medium, moist, silty				
5	13	145		FILL	25	14.8	136	
6	10	95		**Lean CLAY (CL)** Medium, moist, gray with reddish brown mottling				
7	7	70			25	15.1	89	
8	10	50						
9	11	95		**Lean CLAY (CL)** Medium, moist, light brown with reddish brown mottling	28	15.1	111	
10	13	145		**Lean CLAY (CL) to SILT (ML) with sand** Medium to stiff, moist, dark gray, increase in sand with depth ▽				
				Silty SAND (SM) with gravel Medium dense, moist, dark gray				
11	9			**Lean CLAY (CL)** Medium, moist, gray				No recovery
12	17	95		Increase in sand, decrease in plasticity	22	16.7	62	
13	25	70						
				Lean CLAY (CL) Stiff, moist, light brown with reddish brown mottling				
14	23	240						
				BOTTOM OF BORING AT 12.7 METERS				

Station: 13+715 (meters) Offset: 39 (meters:positive=east) (598693.00/1872697.00)

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT
Santa Clara County, California

Log of Boring: EB-16

Date Drilled: 5/13/98
Type of Boring: 152 mm Auger; 124 mm Rotary Wash
Hammer/drop: 623 N/760 mm

Remarks: Augered to 3.0 meters, sampled, then began rotary wash; dry to 3.5 meters prior to rotary wash

Surface Elevation: 10.1 meters (approx.)

Depth, Meters	Samples	Blows/0.3m	Pocket Pen. (kPa)	Torvane (kPa)	Graphic Log	MATERIAL DESCRIPTION	Moisture Content, %	Dry Density, kN/m3	Unconfined Compressive Strength, kPa	Other Tests/ Remarks
	1	55	430			**Lean CLAY (CL) with gravel - FILL** Hard, dry to moist, brown				
	2	56	>430							
	3	52	430				14	18.6	529	
	4	25	265			FILL	27	14.9	284	
						Fat CLAY (CH) Stiff, moist, dark gray				
	5	22	285			**Lean to fat CLAY (CL/CH)** Very stiff, moist, dark gray with gray mottling				
	6	27	285							
	7	24	145			**Lean CLAY (CL)** Medium, moist, gray and brown mottled				
						Lean CLAY (CL) Medium to stiff, moist, brown with light brown mottling				
	8	14	70				21	16.6	87	
	9	25				**Silty SAND (SM) with gravel** Medium dense, brown, trace fine gravel, decrease in gravel below 7.3 meters				
						Lean CLAY (CL) Medium, moist, gray with reddish brown mottling				
	10	17	95				28	14.9	84	
	11	20								
	12	37	190							
	13	52	285			Very stiff, olive gray with light gray mottling	24	15.8	437	
	14	17	190							
						BOTTOM OF BORING AT 13.6 METERS				

Station: 14+04 (meters)   Offset: 38 (meters:positive=east)   (598455.00/1872853.00)

Project: 95-973017NB.00

URS Greiner Woodward Clyde

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Fig. E-52

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT
Santa Clara County, California

Log of Boring: EB-17

Date Drilled: 5/5/98

Type of Boring: 152 mm Auger; 124 mm Rotary Wash

Hammer/drop: 623 N/760 mm

Remarks: Augered to 6.1 meters, then began rotary wash

Surface Elevation: 12.4 meters (approx.)

Depth, Meters	Samples	Blows/0.3m	Pocket Pen. (kPa)	Torvane (kPa)	Graphic Log	MATERIAL DESCRIPTION	Moisture Content, %	Dry Density, kN/m3	Unconfined Compressive Strength, kPa	Other Tests/ Remarks
						Lean CLAY (CL) FILL Moderately compacted, moist, brown				
	1	28								
1	2	29	>430			With wood fragments				
	3	23	>430				16	17.9	244	
2	4	18	240			With some fat clay and 51 mm gravel				
	5	26	310			FILL				
						Fat CLAY (CH)				
3	6	25	335			Stiff, moist, black with gray mottling	30	14.1	341	
						Lean CLAY (CL)				
	7	24	335			Stiff, moist, gray with reddish brown mottling	26	14.9	332	
	8	33	335							
4						**Lean CLAY (CL)**				
	9	24	335			Stiff, moist, brown	20	16.1	195	
						Lean CLAY (CL) Stiff, moist, dark brown				
5						▼				
						5/6/98				
6						**Well-graded GRAVEL (GW) with sand** ▽				
	11	63				Very dense, multicolored gravel to 51 mm				
7										
						Poorly graded SAND (SP)				
8	12	8				Loose, brown to dark gray (wood/organics), hydrogen sulfate odor, with wood fragments				
9										
	13	14	95-145			**SILT (ML)** Medium, moist, gray				
						Increasing clay content				
10										
						Lean CLAY (CL) Medium, moist, gray				
11	14	28	120				31	14.0	77	
12										
	15	31	170			With some brown mottling				
13						Medium to stiff, increase in brown color with occasional gravel to 6 mm				
	16	24	240				22	16.4	131	
14						BOTTOM OF BORING AT 13.6 METERS				
15										

Station: 15+00 (meters)   Offset: 39 (meters:positive=east)   (597771.00/1873374.00)

4/20/00 GUADM GUADM

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT
Santa Clara County, California

Log of Boring: WB-01

Date Drilled: 5/4/98

Type of Boring: 152 mm Auger; 124 mm Rotary Wash

Hammer/drop: 623 N/760 mm

Remarks: Augered to 5.5 meters, then began rotary wash; dry prior to rotary wash

Surface Elevation: 4.3 meters (approx.)

Depth, Meters	Samples	Blows/0.3m	Pocket Pen. (kPa)	Torvane (kPa)	Moisture Content, %	Dry Density, kN/m3	Unconfined Compressive Strength, kPa	Other Tests/ Remarks
	1	44>	430		11	18.9	606	
	2	35	385					
1	3	17	265		18	16.2	150	
	4	8	190					
2	5	7	95		25	14.5	63	
	6	8	95					
3	7	7	170		23	16.0		
	8	7	50					
4	9	19	120		23			
	10	14	95		19	16.9	180	
5	11	11	70		25	15.6	101	
	12	13	95		19	17.9	176	
6	13	13	120		26	15.3	120	
	14	16	285		31	14.0	113	
7	15	18			26	15.3	151	
	16	18	240		22	16.5	169	
8								
9	17	16			21	16.8		+#4=1% -#200=28%
10								
11	18	19	240		31	14.4	120	
12	19	10	70	34	34	13.8	46	
13	20	5						
14								
15								

MATERIAL DESCRIPTION

152 mm Poorly graded GRAVEL (GP-GC) with clay - FILL

Gravelly lean to fat CLAY (CL/CH) FILL
Hard, dry, brown, some fine to coarse sand
Moist, light greenish gray, decrease in sand and gravel
Dark brown, glass fragments

Fat CLAY (CH) FILL
Stiff, moist, dark brownish gray, trace fine to coarse sand, refuse (rubber products)
Large wood fragments
Color variable
Artificial products (rubber, nylon)

FILL

Lean to fat CLAY (CL/CH)
Stiff, moist, dark greenish gray, low to medium plasticity, trace fine sand
Mottles with white and reddish brown

Silty SAND (SM)
Medium dense, wet, yellowish brown, fine sand, alternating with minor clay lenses

Lean to fat CLAY (CL)
Stiff, moist, medium yellowish brown
Soft, brown mottled gray

Silty SAND (SM)
Loose, wet, fine sand, trace to some silt

BOTTOM OF BORING AT 13.6 METERS

Station: 7+32 (meters) Offset: -44 (meters:positive=east) (603355.00/1869549.00)

Project: 95-973017NB.00

URS Greiner Woodward Clyde

Sheet 1 of 1

Fig. E-54

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT
Santa Clara County, California

Log of Boring: WB-02

Date Drilled: 5/5/98

Type of Boring: 152 mm Auger; 124 mm Rotary Wash

Hammer/drop: 623 N/760 mm

Remarks: Augered to 5.6 meters, sampled, then began rotary wash; dry to 6.1 meters prior to rotary wash

Surface Elevation: 5.2 meters (approx.)

Depth, Meters	Samples	Blows/0.3m	Pocket Pen. (kPa)	Torvane (kPa)	Graphic Log	MATERIAL DESCRIPTION	Moisture Content, %	Dry Density, kN/m3	Unconfined Compressive Strength, kPa	Other Tests/ Remarks
	1	31>	430		▨	**Lean CLAY (CL) - FILL** Hard, dry to moist, dark reddish brown, trace fine to coarse sand, patches of fine gravel				
	2	51>	430		▨					
1	3	25	310		▨					
	4	30	385		▨	Moist	21	17.1	397	
2	5	29>	430		▨	Dark brownish gray				
	6	27	385		▨					
3	7	29	310		▨	Increase in silt content	18	15.9	160	
	8	13	360		▨					
4	9	13	95		▨	Heterogeneous clay fill (window glass observed)				
	10	5	95		▨	Window glass, refuse				
	11	6	70	19	▨					
5					▨	Plastic in cuttings	28	14.7	88	
	12	7	70	29	▨	Bottle glass in cuttings FILL				
6	13	5	120		▨	**Lean CLAY (CL)** Medium to stiff, moist, dark brown, very low plasticity, patches of fine sand	39	12.5	52	
	14	7	<50	29	▨					
	15	1			▨	Soft, wet, dark brown, organic, very low plasticity				
7	16	2			▨		34	13.4	22	
8					▨					
9					▨	**Lean CLAY (CL)** Soft, moist, dark gray, medium plasticity				
	17	5	50		▨					
10					▨	Becoming sandy				
	18	32			⁙	**Clayey SAND (SC)** Dense, wet, brown				
11					●	**Well-graded GRAVEL (GW)** Loose, varicolored, fine gravel to 19 mm, grades to Poorly graded SAND (SP)				
	19	5			▨					
			50		▨					
12					▨	**Lean CLAY (CL)** Soft, wet, reddish brown, very low plasticity				
13					⁙	**Clayey SAND (SC)** Medium dense, wet, reddish brown, fine sand, trace to some silt				
	20	20	95		⁙					
14						BOTTOM OF BORING AT 13.6 METERS				
15										

Station: 7+97 (meters)

Offset: -41 (meters:positive=east)

(603041.00/1870015.00)

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT
Santa Clara County, California

Log of Boring: WB-03

Date Drilled: 5/11/98
Type of Boring: 152 mm Auger; 124 mm Rotary Wash
Hammer/drop: 623 N/760 mm

Remarks: Augered to 5.3 meters, sampled, then began rotary wash; dry to 5.8 meters prior to rotary wash

Surface Elevation: 5.7 meters (approx.)

Depth, Meters	Samples	Blows/0.3m	Pocket Pen. (kPa)	Torvane (kPa)	Graphic Log	MATERIAL DESCRIPTION	Moisture Content, %	Dry Density, kN/m3	Unconfined Compressive Strength, kPa	Other Tests/ Remarks
					▨	**Lean CLAY (CL) FILL**				
	1	34	240			Very stiff, moist, brown with black (CH) mottling				
1	2	45	>430		●	Hard, dry to moist, with gravel				
	3	40	240			Very stiff, moist, less gravel	15	17.4	273	
		2760			▨	**Lean CLAY (CL) FILL**				
2	4	4140 kPa	265			Very stiff, moist, brown with light tan mottling				
	5	38	265			Dark brown				
		690								
3							16	17.6		
	6		>430				22	16.8		LL=49
		3105 kPa					21	17.0		PI=30
4	7	36	285			FILL				
	8	28	190		▨	**Lean CLAY (CL)**	24	14.6	85	
		1035				Stiff, moist, gray, with roots and wood				
5	9	2415 kPa			▨	**Lean CLAY (CL) with sand**	20	16.4		
						Stiff, moist, dark gray and dark brown mottled, with fine sand				
	10	61	>430			Clayey SAND (SC) lens				
6	11	48	>430				18	17.3	394	
	12	n/a	265				21	17.0		LL=35
7							22	16.5		PI=16
					▨	**Lean CLAY (CL)**				
8	13	19	50	19		Soft to medium, dark gray with black mottling	29	14.8	75	
9					▨	**Lean to fat CLAY (CL/CH)**				
	14	9	<50	29		Very soft, moist, dark gray	80	8.0	66	
						With wood fragments				
10										
11	15	12								
					░	**Clayey SAND (SC)**				
						Medium dense, dark gray, with wood fragments				
12					▨	**Lean CLAY (CL)**				
	16	9	70	34		Soft, moist, dark gray				
13										
	17	10	50	24			35	13.5	47	
14						BOTTOM OF BORING AT 13.6 METERS				
15										

Station: 8+40 (meters)
Offset: -49 (meters:positive=east)
(602640.00/1870196.00)

Project: 95-973017NB.00

URS Greiner Woodward Clyde

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Fig. E-56

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT
Santa Clara County, California

Log of Boring: WB-04

Date Drilled: 5/15/98
Type of Boring: 152 mm Auger; 124 mm Rotary Wash
Hammer/drop: 623 N/760 mm

Remarks: Augered to 5.2 meters, then began rotary wash; dry prior to rotary wash

Surface Elevation: 6.0 meters (approx.)

Depth, Meters	Samples	Blows/0.3m	Pocket Pen. (kPa)	Torvane (kPa)	Graphic Log	MATERIAL DESCRIPTION	Moisture Content, %	Dry Density, kN/m3	Unconfined Compressive Strength, kPa	Other Tests/ Remarks
						Lean CLAY (CL) FILL Hard, brown with some black mottling, some fine gravel lenses				
	1	33	>430							
1	2	39	>430				19	17.0	361	
							17	17.4		
	3	2760 kPa 690	385				17	17.6		
2							16	18.4		
3	4	690 3445 kPa	430							
5	5	28	>430			Less plastic, dark brownish gray	15	17.1	452	
6						FILL				
	6	8 690	70	14		**Lean CLAY (CL)** Medium to stiff, moist, dark grayish brown	32	13.9	83	
7	7	3445 kPa	190							
8	8	28	190			Stiff, brown with gray mottling	23	16.0	179	
	9	690 kPa	145							
10						Sand lens				
11	10	18	95			**Lean CLAY (CL)** Medium to stiff, brown with gray mottling				
	11	20								
						Silty SAND (SM) to Sandy SILT (ML) Very dense, moist, brown				
13	12	43								
14						BOTTOM OF BORING AT 13.6 METERS				
15										

Station: 8+87 (meters) Offset: -49 (meters:positive=east) (602254.00/1870463.00)

Project: 95-973017NB.00 **URS Greiner Woodward Clyde** Sheet 1 of 1 Fig. E-57

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT
Santa Clara County, California

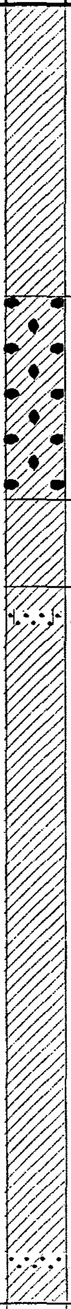
Log of Boring: WB-05

Date Drilled: 5/11/98
Type of Boring: 152 mm Auger; 124 mm Rotary Wash
Hammer/drop: 623 N/760 mm

Remarks: Augered to 5.3 meters, sampled, then began rotary wash; dry to 5.8 meters prior to rotary wash

Surface Elevation: 6.6 meters (approx.)

Depth, Meters	Samples	Blows/0.3m	Pocket Pen. (kPa)	Torvane (kPa)	Moisture Content, %	Dry Density, kN/m3	Unconfined Compressive Strength, kPa	Other Tests/ Remarks
	1	28	335					
1	2	21	>430					
	3	30	285		20	16.7	294	
2	4	3445 kPa	>430					
	5	38	335					
3	6	44	>430		15	18.4	386	
	7	30	385					
4	8	690 1515 kPa	385					
	9	24	240		19	16.6	107	
5	10	19	95					
	11	17	50	34				
6								
	12	7	0					
7								
8	13	12	0		40	12.7	34	
9								
10	14	690 1380 kPa	95					
11	15	12	50	29				
12								
	16	7	<50	29	67	9.1	47	
13	17	12	95					
14								
15								



MATERIAL DESCRIPTION

Lean CLAY (CL) FILL
Very stiff to hard, brown with some light brown lenses, some gravel layers

With gravel

FILL

Lean CLAY (CL) with gravel
Hard, dry to moist, brown, subangular gravel

Lean CLAY (CL)
Soft, moist, gray, with fine roots

Lean CLAY (CL)
Soft, moist, brown

Silty SAND (SM) - Loose, wet, brown

Soft, brown with reddish brown mottling

Medium, gray and brown mottled

Medium to soft, with wood fragments

Clayey SAND (SC) lens - Loose, moist, gray

BOTTOM OF BORING AT 13.6 METERS

Station: 9+61 (meters)　Offset: -48 (meters:positive=east)　(601787.00/1871039.00)

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT
Santa Clara County, California

Log of Boring: WB-06

Date Drilled: 5/11/98
Type of Boring: 152 mm Auger; 124 mm Rotary Wash
Hammer/drop: 623 N/760 mm

Remarks: Augered to 4.6 meters, sampled, then began rotary wash; dry to 5.0 meters prior to rotary wash

Surface Elevation: 7.2 meters (approx.)

Depth, Meters	Samples	Blows/0.3m	Pocket Pen. (kPa)	Torvane (kPa)	MATERIAL DESCRIPTION	Moisture Content, %	Dry Density, kN/m3	Unconfined Compressive Strength, kPa	Other Tests/ Remarks
	1 ▧	8	145		**152 to 203 mm Poorly graded GRAVEL (GP-GC) with clay - FILL**				
	2 ▧	11	>430		**Sandy lean to fat CLAY (CL/CH) FILL**				
1	3 ▧	32	>430		Hard, dry to moist, dark reddish brown, medium to high plasticity, trace to some fine to coarse sand, trace fine gravel	22	16.6	321	
	4 ▧	28	>430		Moist				
2	5 ▧	22	>430		← Minor gravel layer 25 to 52 mm thick				
	6 ▧	63	>430						
3	7 ▧	59	>430		Dry to moist, increase in silt, decrease in sand and gravel				
	8 ▧	39	>430			14	18.3	450	
4	9 ▧	39	>430						
	10 ▧	17	145		**Lean CLAY (CL) FILL** Medium to stiff, moist, very dark brown, low to medium plasticity				
5	11 ▧	11	95		Becoming sandy (fine sand)	22	15.9	94	
	12 ☐	5	120		Patches of sand				
	13 ▧	14			FILL				
6	14 ▧	22	190		**Fat CLAY (CH)** Moist, yellowish brown, high plasticity				
7					Decreased plasticity				
8	15 ▧	21	<50						
	16 ☐	11			**Silty SAND (SM)** Medium dense, wet, medium yellowish brown, fine sand				
9					**Lean CLAY (CL)** Medium, moist, light brown, low to medium plasticity				
	17 ▧	10	95			26	15.8	61	
10	18 ☐	13			**Clayey SAND (SC)** Medium dense, moist, fine sand, trace to some clay variable with depth				
11					**Fat CLAY (CH)** Medium, moist, brown, medium to high plasticity				
	19 ▧	17	70	29		31	14.2	115	
12					**Poorly graded SAND (SP)** Medium dense, wet, dark greenish gray, fine to medium sand				
13	20 ☐	21							
					Lean CLAY (CL) Medium, moist, dark brownish gray, medium plasticity				
14					BOTTOM OF BORING AT 13.3 METERS				
15									

Station: 10+60 (meters) Offset: -50 (meters:positive=east) (601103.00/1871709.00)

Project: 95-973017NB.00

URS Greiner Woodward Clyde

Sheet 1 of 1

Fig. E-59

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT
Santa Clara County, California

Log of Boring: WB-07

Date Drilled: 5/8/98

Type of Boring: 152 mm Auger; 124 mm Rotary Wash

Hammer/drop: 623 N/760 mm

Remarks: Augered to 5.9 meters, then began rotary wash; dry prior to rotary wash

Surface Elevation: 7.9 meters (approx.)

Depth, Meters	Samples	Blows/0.3m	Pocket Pen. (kPa)	Torvane (kPa)	Graphic Log	MATERIAL DESCRIPTION	Moisture Content, %	Dry Density, kN/m3	Unconfined Compressive Strength, kPa	Other Tests/ Remarks
	1	12				**203 mm Poorly graded GRAVEL (GP-GC) with clay - FILL**				
	2	18				**Clayey SAND (SC) FILL** Medium dense, dry, fine to coarse sand, trace fine gravel, moist after 0.5 meters				
1	3	19								
	4	16	240			**Lean CLAY (CL) FILL** Very stiff to hard, moist, dark reddish brown, medium to high plasticity, trace fine to coarse sand	15	17.8	396	
2	5	26	>430							
	6	45	>430							
3	7	51	>430							
	8	34	285							
4	9	14	>430							
	10	10	70			Soft	26	14.5	83	
	11	11	95			Moist to wet, patches of fine sand FILL				
5	12	12	95			**SILT (ML)** Medium, moist, gray with reddish brown staining, patches of sandy clay and clumps of sand				
	13	7	95							
6	14	5								
	16	14	50			**Lean CLAY (CL)** Very moist, dark brownish gray, medium plasticity Medium, olive green, high plasticity	22	16.3	73	
7						Brown				
8	17	22	145			**Silty SAND (SM)** Medium dense, wet, medium yellowish brown, fine sand				
9						**Lean CLAY (CL)** Medium, moist, yellowish brown, medium plasticity, trace fine to medium sand				
10	18	13	120			Silty SAND (SM) lens - Medium dense, wet, light brown				
11	19	17				**Poorly graded SAND (SP-SM) with silt** Medium dense, wet, light brown, fine sand				
	20	9	120			**Lean CLAY (CL)** Medium, moist, light brownish gray with reddish brown mottling, medium plasticity				
12										
13	21	16	<50			Olive green, medium to high plasticity	32	14.2	105	
14						BOTTOM OF BORING AT 13.6 METERS				
15										

Station: 11+79 (meters) Offset: -33 (meters:positive=east) (600394.00/1872385.00)

Project: 95-973017NB.00

URS Greiner Woodward Clyde

Sheet 1 of 1

Fig. E-60

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT
Santa Clara County, California

Log of Boring: WB-08

Date Drilled: 5/7/98
Type of Boring: 152 mm Auger; 124 mm Rotary Wash
Hammer/drop: 623 N/760 mm

Remarks: Augered to 3.3 meters, sampled, then began rotary wash
Surface Elevation: 8.3 meters (approx.)

Depth, Meters	Samples	Blows/0.3m	Pocket Pen. (kPa)	Torvane (kPa)	MATERIAL DESCRIPTION	Moisture Content, %	Dry Density, kN/m3	Unconfined Compressive Strength, kPa	Other Tests/ Remarks
	1	29	385		**Lean CLAY (CL) FILL** Hard to stiff, moist, brown, some burnt wood fragments				
1	2	31	240			15	17.3	285	
	3	22			**SILT (ML) with sand - FILL** Stiff, moist, brown				
2	4	1380 kPa	>430		**Lean CLAY (CL) FILL** Hard to medium, moist, brown				
	5	26	385						
3	6	34	285			18	17.2	598	
	7	690 kPa	145		FILL				
4					**Lean CLAY (CL)** Medium, moist, brownish gray and brown mottled				
	8	11 690	70		Soft				
5	9	1380 kPa	95						Fluid loss, casing to 5.2 meters
	10	12	145						
6		690							No recovery
	11	1205 kPa 0			**Lean CLAY (CL)** Soft to medium, dark gray, trace sand				
7	12	345 kPa	95						
8	13	16	145	43		23	15.5	74	
9	14	6	95		Increase in sand				
10									
11	15	9			**Well-graded SAND (SW-SM) with silt and gravel** Loose, wet, dark gray More gravel				
12									Lost circulation
	16	10	190		**Lean CLAY (CL)** Medium, moist, brownish gray with reddish brown mottling				
13	17	19	50			25	15.6	95	
14					BOTTOM OF BORING AT 13.6 METERS				
15									

Station: 12+20 (meters)
Offset: -39 (meters:positive=east)
(600018.00/1872478.00)

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT
Santa Clara County, California

Log of Boring: WB-09

Date Drilled: 5/18/98
Type of Boring: 152 mm Auger; 124 mm Rotary Wash
Hammer/drop: 623 N/760 mm

Remarks: Augered to 4.6 meters, sampled, then began rotary wash; dry to 5.0 meters prior to rotary wash

Surface Elevation: 8.4 meters (approx.)

Depth, Meters	Samples	Blows/0.3m	Pocket Pen. (kPa)	Torvane (kPa)	Graphic Log	MATERIAL DESCRIPTION	Moisture Content, %	Dry Density, kN/m3	Unconfined Compressive Strength, kPa	Other Tests/ Remarks
	1	19	>430		▨	**Lean CLAY (CL) FILL** Hard, dry to moist, brown				
1	2	16	240			← Concrete bits				
	3	13				Less plastic	21	15.8	221	
2										
3										
	4	24	285				15	17.2	467	
4										
						FILL ↑				
5	5	18	95		▨	**Lean CLAY (CL)** Medium to stiff, moist, dark gray and brown	24	15.0	86	
6										
	6	7	95				37	13.0	63	
7	7	11	95							
8	8	11	50							
					▨	**Lean CLAY (CL)** Medium, moist, light gray				
					⁘	**Well-graded GRAVEL (GW) with sand** Black				
9					▨	**Lean CLAY (CL)** Stiff, moist, gray				
	9	15	145							
10										
11	10	17	95			Medium to stiff, light greenish gray	29	13.9	104	
12										
	11	33	95							
13	12	19	120							
14						BOTTOM OF BORING AT 13.6 METERS				
15										

Station: 12+40 (meters) Offset: -38 (meters:positive=east) (599812.00/1872499.00)

Project: 95-973017NB.00

URS Greiner Woodward Clyde

Sheet 1 of 1

Fig. E-62

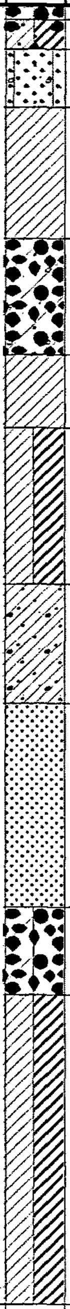
LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT
Santa Clara County, California

Log of Boring: WB-10

Date Drilled: 5/14/98
Type of Boring: 152 mm Auger; 124 mm Rotary Wash
Hammer/drop: 623 N/760 mm

Remarks: Augered to 4.6 meters, then began rotary wash; dry prior to rotary wash

Surface Elevation: 8.5 meters (approx.)



Depth, Meters	Samples	Blows/0.3m	Pocket Pen. (kPa)	Torvane (kPa)	MATERIAL DESCRIPTION	Moisture Content, %	Dry Density, kN/m3	Unconfined Compressive Strength, kPa	Other Tests/ Remarks
	1	10	145		**152 mm Poorly graded GRAVEL (GP-GC) with clay - FILL**				0.0ppm 0 - 4.6 meters
	2	11	190		**Sandy lean to fat CLAY (CL/CH) with gravel - FILL** Soft to stiff, moist, reddish brown, low to high plasticity				
1	3	7	240						
	4	12			**Sandy SILT (ML) FILL** Stiff, moist, reddish brown, fine sand	19	16.4	117	
2					**Sandy lean CLAY (CL) FILL** Soft, moist, reddish brown, low plasticity, trace fine gravel				
3	5	8			**Clayey GRAVEL (GC) FILL** Loose, moist, some fine to coarse sand, fine gravel, wood fragments				
4					**Lean CLAY (CL) FILL** Soft, moist, reddish brown, low plasticity, trace sand FILL				
	6	9	120						
5	7	16	95		**Lean to fat CLAY (CL/CH)** Medium, moist, brown, medium to high plasticity	29	14.9	166	
	8	13	95		Light brownish gray mottled light gray, soft, medium plasticity				
6	9	19	95		**Sandy lean Clay (CL)** Medium, moist, olive green				
7					**Poorly graded SAND (SP)** Dense, wet, dark gray, fine to coarse sand to fine gravel				
	10	32							
8	11	47							
9									
	12	54			**Poorly graded GRAVEL (GP-GC) with clay** Very dense, wet, dark brown, fine gravel				
10									
11	13	25	120		**Lean to fat CLAY (CL/CH)** Stiff, moist, dark greenish gray, medium to high plasticity	27	15.2	182	
12	14	41	240		Stiff to very stiff				
13	15	16							No recovery
14					BOTTOM OF BORING AT 13.6 METERS				
15									

Station: 12+70 (meters) Offset: -38 (meters:positive=east) (599540.00/1872664.00)

Project: 95-973017NB.00 | **URS Greiner Woodward Clyde** | Sheet 1 of 1 | Fig. E-63

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT
Santa Clara County, California

Log of Boring: WB-11

Date Drilled: 5/14/98

Type of Boring: 152 mm Auger; 124 mm Rotary Wash

Hammer/drop: 623 N/760 mm

Remarks: Augered to 3.0 meters, sampled, then began rotary wash; dry prior to rotary wash

Surface Elevation: 8.7 meters (approx.)

Depth, Meters	Samples	Blows/0.3m	Pocket Pen. (kPa)	Torvane (kPa)	Graphic Log	MATERIAL DESCRIPTION	Moisture Content, %	Dry Density, kN/m3	Unconfined Compressive Strength, kPa	Other Tests/ Remarks
	1	6	190			**152 mm Poorly graded GRAVEL (GP-GC) with clay - FILL**				
	2	21	335			**Lean to fat CLAY (CL/CH) FILL** Medium, moist, dark brownish gray				
1	3	22	>430			Stiff, trace fine sand and fine to coarse gravel to 25 mm				
	4	23	>430			Decreased sand and gravel content	16	17.5	223	
2						Medium				
3	5	22	170							
4						**Lean CLAY (CL) FILL** Soft, moist, reddish brown, low to medium plasticity FILL				
	6	7	50							
5	7	7	50			**Lean CLAY (CL)** Soft, moist, brown with reddish brown mottling	32	13.8	50	
	8	14	190							
6						**Lean CLAY (CL)** Stiff, moist, light brown, trace fine sand				
7										
	9	16	145				12	18.3	164	
8	10	6				**Gravelly lean CLAY (CL)** Soft, wet, light brown, some sand and occasional sand lenses				
9	11	10	145			**Lean to fat CLAY (CL/CH)** Medium to stiff, moist, dark greenish gray, trace fine sand				
	12	13	215				26	15.4	70	
10										
						Stiff				0.0ppm
11	13	16								
12						Olive green				
	14	13	95							
13						BOTTOM OF BORING AT 13.0 METERS				
14										
15										

Station: 13+00 (meters)   Offset: -39 (meters:positive = east)   (599319.00/1872805.00)

Project: 95-973017NB.00

URS Greiner Woodward Clyde

Sheet 1 of 1

Fig. E-64

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT
Santa Clara County, California

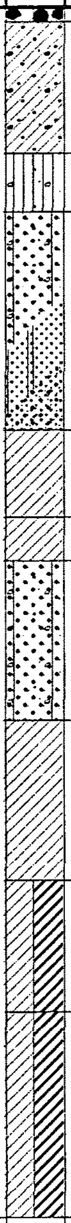
Log of Boring: WB-12

Date Drilled: 5/13/98
Type of Boring: 152 mm Auger; 124 mm Rotary Wash
Hammer/drop: 623 N/760 mm

Remarks: Augered to 4.6 meters, sampled, then began rotary wash; dry to 5.0 meters prior to rotary wash

Surface Elevation: 8.9 meters (approx.)

Samples	Blows/0.3m	Pocket Pen. (kPa)	Torvane (kPa)	Moisture Content, %	Dry Density, kN/m3	Unconfined Compressive Strength, kPa	Other Tests/ Remarks
1	19	310					
2	36	385		14	18.3	251	
3	17	360					
4	33>	430					
5	6						
6	6	95					
7	8	70		26	15.2	50	
8	13	95					
9	12						
10	15	120					
11	11	170		23	16.2	60	
12	31	285					
13	19	145		29	14.7	139	



MATERIAL DESCRIPTION

152 mm Poorly graded GRAVEL (GP-GC) with clay - FILL

Sandy lean CLAY (CL) FILL
Very stiff to hard, dry to moist, dark brown, occasional patches of sand

SILT (ML) with sand - FILL
Hard, moist, dark brown

Silty SAND (SM) FILL
Loose, dry to moist, dark brown, fine to medium sand

Grades to Poorly graded SAND (SP-SM) with silt

Grades to Well-graded SAND (SW) - Moist, dark brown, fine to coarse sand, trace fine gravel to 12 mm

FILL

Lean CLAY (CL)
Medium, moist, reddish brown, medium plasticity, trace fine to coarse sand

Lean CLAY (CL)
Medium, moist, light greenish gray

Silty SAND (SM)
Medium dense, wet, grayish brown, trace silt
Coarser sand

Lean CLAY (CL)
Soft to medium, moist, dark greenish gray, low to medium plasticity

Lean to fat CLAY (CL/CH)
Medium to hard, moist, gray

Lean to fat CLAY (CL/CH)
Stiff,moist, light brown with reddish brown mottling, high plasticity

BOTTOM OF BORING AT 12.7 METERS

Depth, Meters: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

Station: 13+30 (meters) Offset: -38 (meters:positive=east) (599068.00/1872763.00)

Project: 95-973017NB.00 | **URS Greiner Woodward Clyde** | Sheet 1 of 1 | Fig. E-65

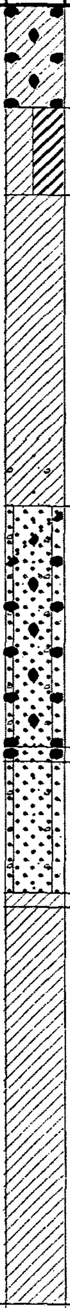
LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT
Santa Clara County, California

Log of Boring: WB-13

Date Drilled: 5/6/98
Type of Boring: 152 mm Auger; 124 mm Rotary Wash
Hammer/drop: 623 N/760 mm

Remarks: Augered to 5.8 meters, then began rotary wash
Surface Elevation: 9.1 meters (approx.)

Samples	Blows/0.3m	Pocket Pen. (kPa)	Torvane (kPa)	Moisture Content, %	Dry Density, kN/m3	Unconfined Compressive Strength, kPa	Other Tests/ Remarks
1	43	>430					
2	41	335					
3	30	>430		15	18.2	322	
4	58	>430					
5	37	>430					
6	27	>430					
7	37	310					
8	42	215					
9	31	240		14	18.4	90	
10	23	170					
11	24	405					
12	10						
13	5						Excessive fluid loss, casing to 6.1 meters
14	15						
15	4	<50 <50 70					
16	37	335		19	17.4	303	
17	20	145					
18	18	145		23	16.0	48	



MATERIAL DESCRIPTION

Lean CLAY (CL) with gravel - FILL
Hard, moist, dark brown and brown mottled, gravel to 12 mm

Lean CLAY (CL) FILL
Hard, moist, brown and light brown, trace fine gravel, with some fat clay (CH)

Lean CLAY (CL) FILL
Very stiff to hard, moist, dark gray, with occasional gravel to 25 mm
More plastic, some light gray streaks
With sand
FILL

Silty SAND (SM)
Loose, wet, black, organic
Coarser sand to gravel
Loose, dark gray with brown organic layers 3 to 6 mm thick
Redwood fragments and some occasional gravel to 51 mm

Silty SAND (SM) with gravel
Medium dense, wet, brownish gray

Silty SAND (SM)
Medium dense, wet, gray

Lean CLAY (CL)
Soft, moist, brownish gray

Lean CLAY (CL)
Soft, moist, gray
Medium
Stiff, with brown mottling
Medium, with reddish brown mottling, trace sand

BOTTOM OF BORING AT 13.6 METERS

Station: 13+50 (meters)
Offset: -36 (meters:positive=east)
(598912.00/1872628.00)

Project: 95-973017NB.00
URS Greiner Woodward Clyde
Sheet 1 of 1
Fig. E-66

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT
Santa Clara County, California

Log of Boring: WB-14

Date Drilled: 5/18/98
Type of Boring: 152 mm Auger; 124 mm Rotary Wash
Hammer/drop: 623 N/760 mm

Remarks: Augered to 3.0 meters, sampled, then began rotary wash; dry to 3.5 meters prior to rotary wash
Surface Elevation: 10.9 meters (approx.)

Depth, Meters	Samples	Blows/0.3m	Pocket Pen. (kPa)	Torvane (kPa)	Graphic Log	MATERIAL DESCRIPTION	Moisture Content, %	Dry Density, kN/m3	Unconfined Compressive Strength, kPa	Other Tests/ Remarks
						Lean CLAY (CL) FILL Hard, moist, brown				
	1	64>	430							
1	2	58>	430				12	18.8	754	
	3	40>	430							
2										
						FILL				
3						**Lean to fat CLAY (CL/CH)** Very stiff, moist, grayish brown with some light brown mottling				
	4	19	335				30	14.0	145	
4	5	14	335							
						Silty SAND (SM) Lens - Brown				
	6	9	190			**Fat CLAY (CH)** Medium to stiff, moist, dark gray	22	15.3	42	
	7	16	190			**Lean CLAY (CL)** Medium, moist, dark brown				
5										
	8	4135 kPa 1380				Wood				
						Sand and Gravel Dense, wet, gray				
6										
	9	16	145			**Lean CLAY (CL)** Stiff, moist, light gray and reddish brown mottled				
7										
8	10	11	95			Medium to stiff				
9										
	11	24>	430			Stiff, gray	20	17.1	137	
10										
11	12	6	95			Medium				
12										
	13	12	95				23	15.9	48	
13						BOTTOM OF BORING AT 12.7 METERS				
14										
15										

Station: 14+29 (meters) Offset: -40 (meters:positive=east) (598248.00/1873015.00)

Project: 95-973017NB.00	URS Greiner Woodward Clyde	Sheet 1 of 1	Fig. E-67

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT
Santa Clara County, California

Log of Boring: WB-15

Date Drilled: 5/5/98
Type of Boring: 152 mm Auger; 124 mm Rotary Wash
Hammer/drop: 623 N/760 mm

Remarks: Augered to 6.1 meters, then began rotary wash with water
Surface Elevation: 13.4 meters (approx.)

Depth, Meters	Samples	Blows/0.3m	Pocket Pen. (kPa)	Torvane (kPa)	Graphic Log	MATERIAL DESCRIPTION	Moisture Content, %	Dry Density, kN/m3	Unconfined Compressive Strength, kPa	Other Tests/ Remarks
	1	32				**Lean CLAY (CL) with gravel - FILL** Very stiff to hard, dry to moist, brown, with asphalt				
1	2	42	>430							No recovery
	3	28	>430			**Lean CLAY (CL) FILL** Very stiff to hard, moist, brown				
2	4	24	>430				25	15.2	245	
	5	36	>430							
	6	55	>430							
3	7	52				Grades to Fat CLAY (CH) FILL	26	15.1	665	
4	8	690 1380 kPa	335			**Lean to fat CLAY (CL/CH)** Very stiff, moist, gray with reddish brown mottling				
	9	33	310			Darker gray	32	13.5	220	
5	10		170							
6		135				**Lean CLAY (CL)** ▽ Medium, moist, light brown with gray mottling				
	11	690 825 kPa								
7										
8	12	16	145			**Lean CLAY (CL)** Stiff, moist, gray reddish brown mottling	26	15.3	142	
9	13	29	>430			**Sandy lean CLAY (CL)** Very stiff, moist, light brown, fine sand				
10						Increase in sand				
11	14	60				**Well-graded GRAVEL (GW) with sand** Very dense, with multicolored gravel up to more than 51 mm				
12	15	41				Dense				
13	16	18				**Lean CLAY (CL)** Medium, moist, brown; light to medium gray with depth				
14						BOTTOM OF BORING AT 13.6 METERS				
15										

Station: 15+76 (meters) Offset: -35 (meters:positive=east) (597146.00/1873831.00)

Project: 95-973017NB.00	URS Greiner Woodward Clyde	Sheet 1 of 1	Fig. E-68

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT
Santa Clara County, California

Log of Boring: WB-16

Date Drilled: 5/4/98
Type of Boring: 152 mm Auger; 124 mm Rotary Wash
Hammer/drop: 623 N/760 mm

Remarks: Augered to 6.1 meters, sampled, then began rotary wash; dry to 6.6 meters prior to rotary wash

Surface Elevation: 17.0 meters (approx.)

Depth, Meters	Samples	Blows/0.3m	Pocket Pen. (kPa)	Torvane (kPa)	MATERIAL DESCRIPTION	Moisture Content, %	Dry Density, kN/m3	Unconfined Compressive Strength, kPa	Other Tests/ Remarks
	1	16	>430		**SILT (ML) FILL** Hard, moist, reddish brown, with some sand lenses	13	16.3	146	
1	2	9	>430						
	3	21	>430			18	16.8	190	
2	4	29	>430		Increase in clay				
	5	27	>430		**Lean CLAY (CL) FILL** Hard, dry, dark brown with black mottling	12	16.1	259	
	6	23	>430						
3	7	32	>430		**Sandy SILT (ML) FILL** Hard, dry, light brown	19	15.7	589	
	8	35	>430		**Lean CLAY (CL)** Hard, dry, light brown FILL	22	15.8	765	
4	9	35	>430		**Lean CLAY (CL)** Hard, moist, gray with reddish brown and black mottling	25	15.0	397	
	10	48	>430			24	15.7	426	
5					**Lean to fat CLAY (CL/CH)** Hard, moist, gray and brown mottled				
6	11	27	240		Very stiff	27	15.3	304	
7									
8	12	15	145		Stiff ▼ 5/5/98	34	14.0	115	
9	13	11	120		Grades to Lean CLAY (CL) - Medium	28	14.8	55	
10									
11	14	13	95			23	16.2	69	
12	15	12	190		Trace sand	21	16.9	59	
13	16	9	70	34	Soft	25	15.7	41	
14					BOTTOM OF BORING AT 13.6 METERS				
15									

Station: 16+75 (meters) Offset: -38 (meters:positive=east) (596425.00/1874444.00)

Project: 95-973017NB.00

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Sheet 1 of 1

Fig. E-69

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT
Santa Clara County, California

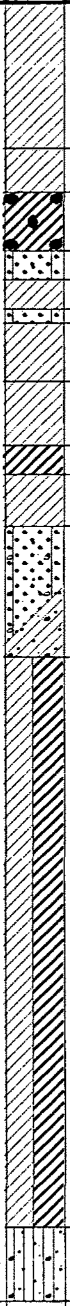
Log of Boring: WB-17

Date Drilled: 5/4/98
Type of Boring: 152 mm Auger; 124 mm Rotary Wash
Hammer/drop: 623 N/760 mm

Remarks: Augered to 5.6 meters, sampled, then began rotary wash; dry to 6.1 meters prior to rotary wash

Surface Elevation: 18.2 meters (approx.)

Samples	Blows/0.3m	Pocket Pen. (kPa)	Torvane (kPa)	Moisture Content, %	Dry Density, kN/m3	Unconfined Compressive Strength, kPa	Other Tests/ Remarks
1	44	>430		14	18.0	644	
2	44	>430					
3	47	>430		24	15.8	499	
4	43	>430		22	16.0	586	
5	13						
6	21	>430					
7	43			21	15.9	803	
8	1725 kPa	>430					
9	40	>430		20	16.4	439	
10	35	>430		17	17.6	278	
11	29						
12	22						
13	25			25	15.0		+#200=0 -#4=62%
14	16						
15	345 345 1170 kPa	70					
16	17	145		42	12.6	128	
17	21	190		22	16.1	133	
18	20	265		27	15.3	98	
19	32	260		23	16.1	86	



MATERIAL DESCRIPTION

Lean CLAY (CL) with gravel - FILL
Hard, dry to moist, brown with reddish brown mottling, gravel to 51 mm

FILL

With brick fragments

Lean CLAY (CL)
Very stiff, moist, gray with black speckling

Gravelly fat CLAY (CH)
Hard, damp, brown with multicolored gravel

Silty SAND (SM)
Medium dense, dry to moist, brown

Lean CLAY (CL)
Very stiff, dry to moist, dark brown

Silty SAND (SM)
Medium dense, dry to moist, brown

Lean CLAY (CL)
Hard, moist, dark brown

Lean CLAY (CL)
Hard, moist, gray

Fat CLAY (CH)
Hard, moist, black with light gray mottling

Lean CLAY (CL)
Very stiff, moist, gray with brown mottling

Silty SAND (SM)
Medium dense, moist, light brownish gray, some clay at 5.8 meters
Grades to Sandy lean CLAY (CL)

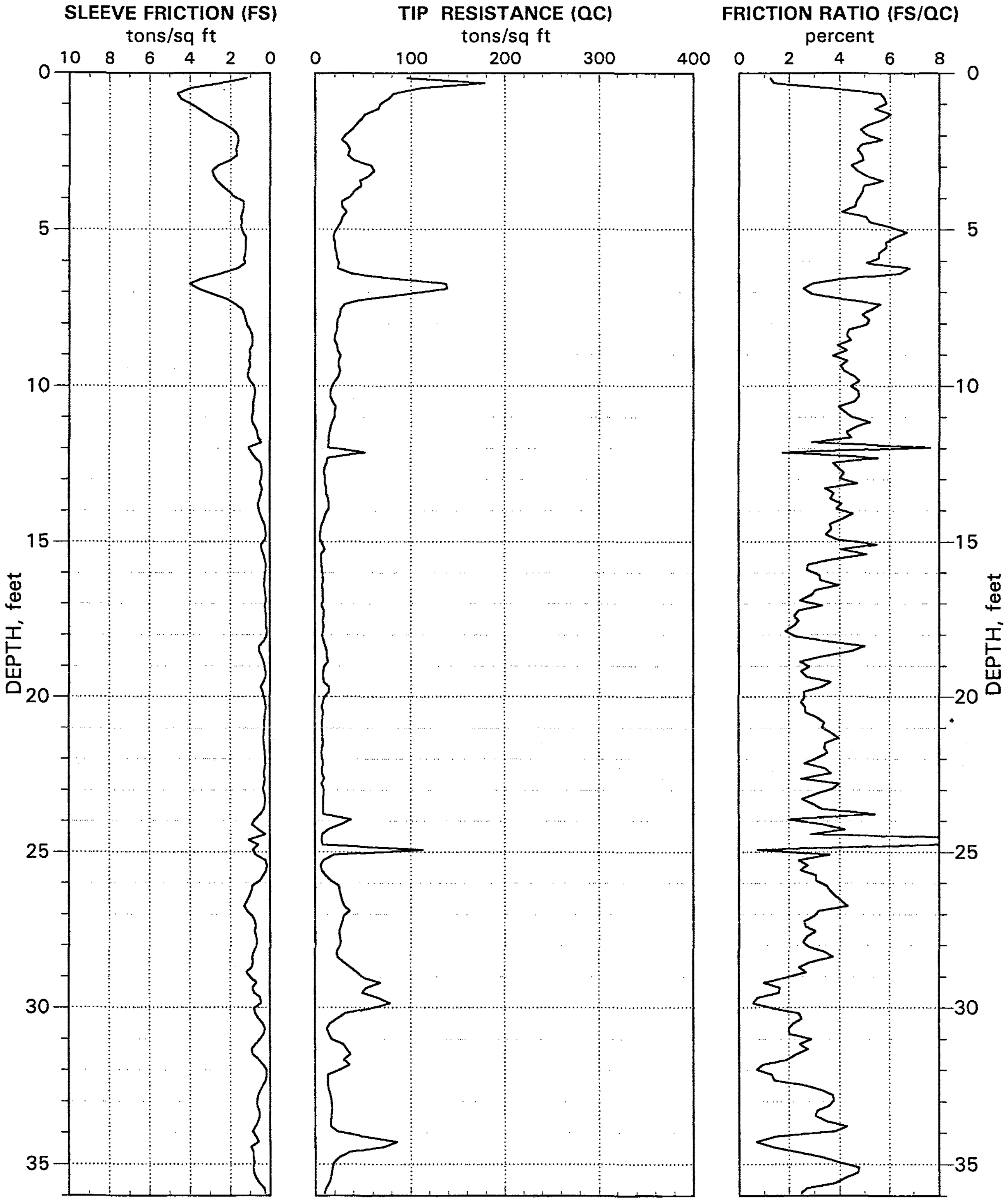
Lean to fat CLAY (CL/CH)
Medium, moist, dark gray

With brown mottling

Sandy SILT (ML)
Medium, moist, light brown with dark brown mottling

BOTTOM OF BORING AT 13.6 METERS

Station: 17+30 (meters) Offset: -22 (meters:positive=east) (595958.00/1874735.00)



North: 603491
East: 1869444
Date: 4/15/98

Station: 7+191
Offset (m): 70
Surface Elevation: 14 feet (approx.)

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT

Project Number: 95-973017NB.00	**CONE PENETRATION TEST** **SOUNDING NUMBER: EC01**	**Fig.F-1** **Page 1 of 2**

4/20/00 GUADE_CN GUADE

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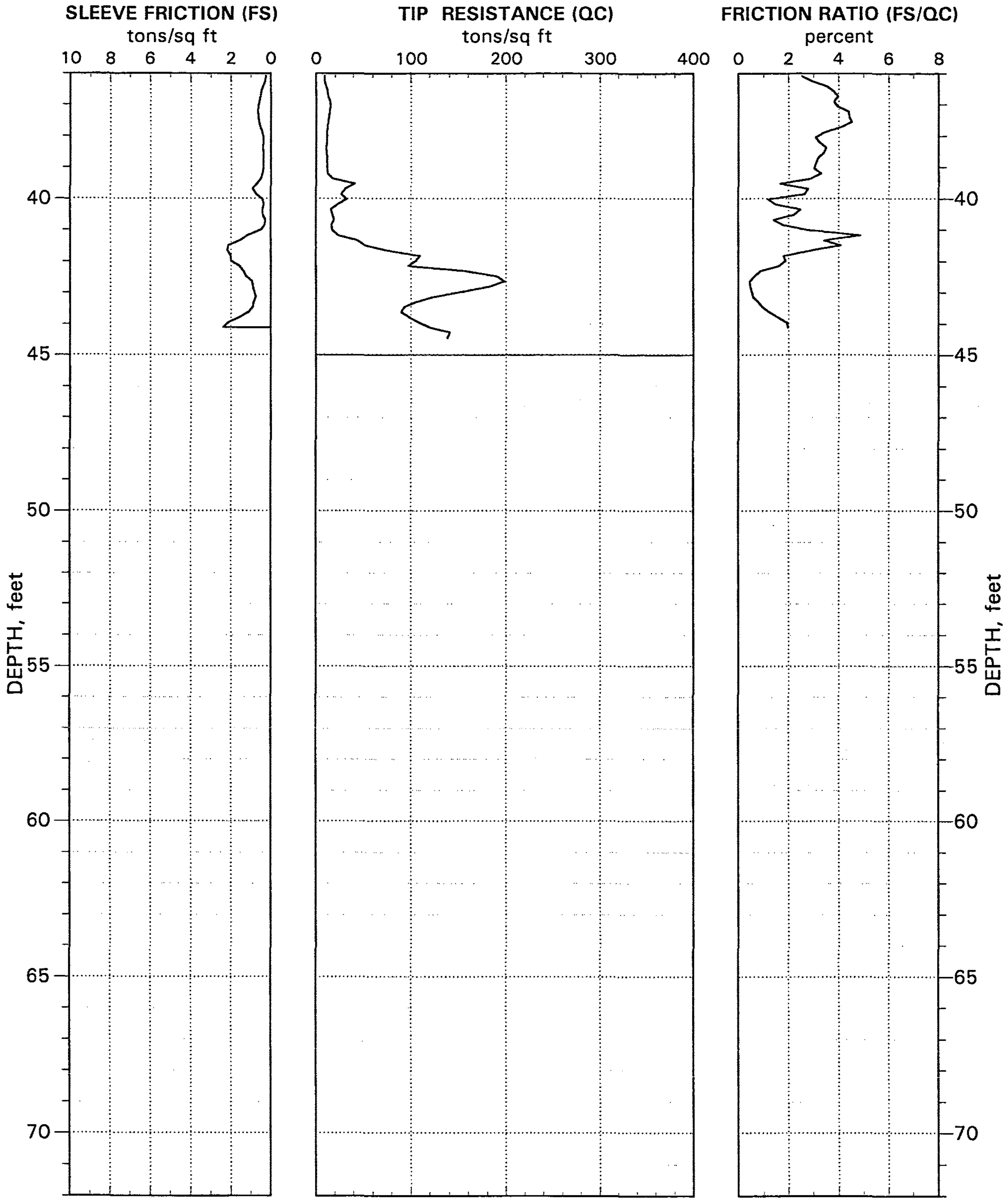


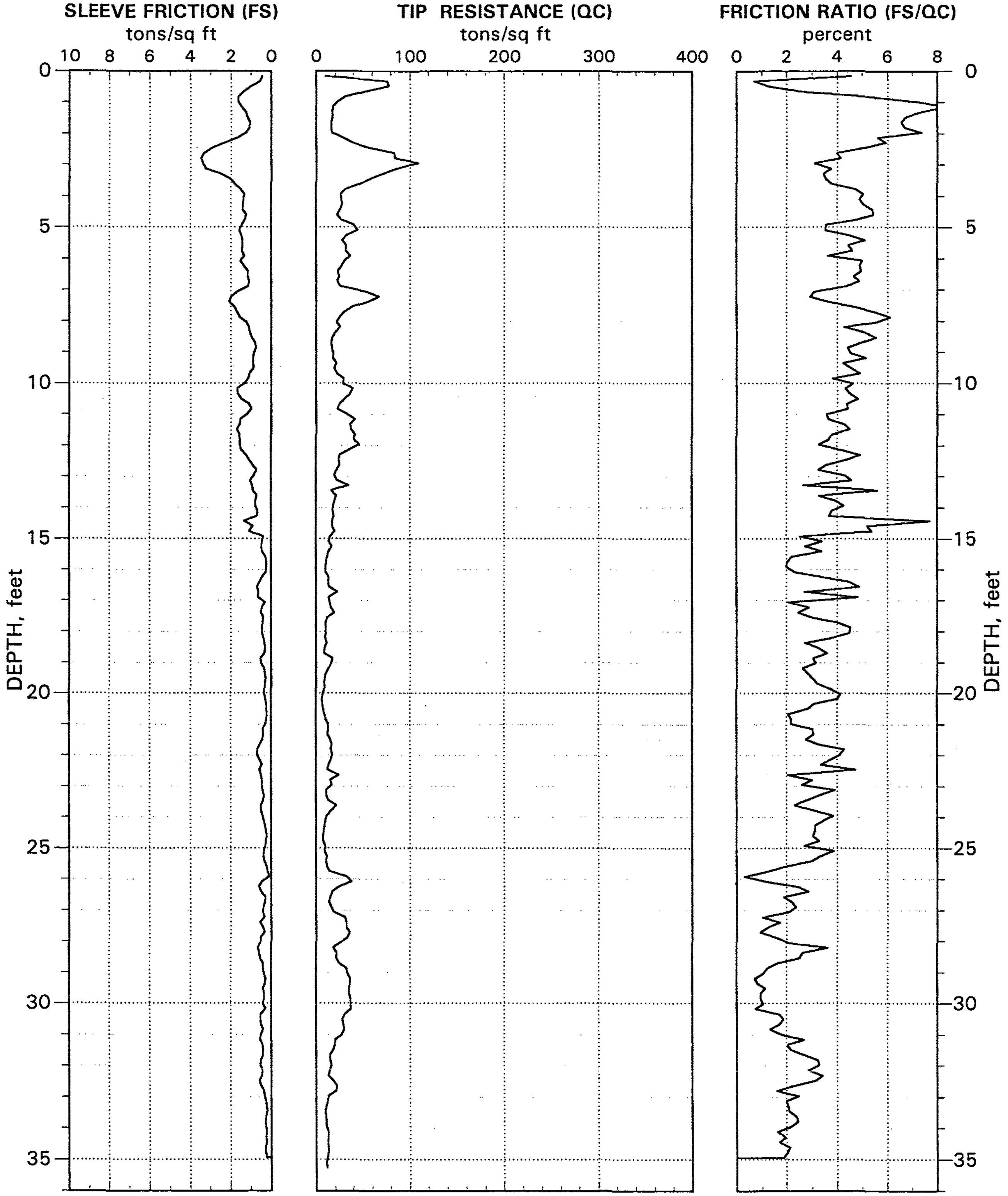
North: 603491
East: 1869444
Date: 4/15/98

Station: 7+191
Offset (m): 70
Surface Elevation: 14 feet (approx.)

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT

Project Number: 95-973017NB.00	CONE PENETRATION TEST SOUNDING NUMBER: EC01	Fig.F-1 Page 2 of 2

URS Greiner Woodward Clyde



North: 603088
East: 1870088
Date: 4/15/98

Station: 7+945
Offset (m): 42
Surface Elevation: 17 feet (approx.)

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT

Project Number: 95-973017NB.00	CONE PENETRATION TEST SOUNDING NUMBER: EC02	Fig.F-2 Page 1 of 1

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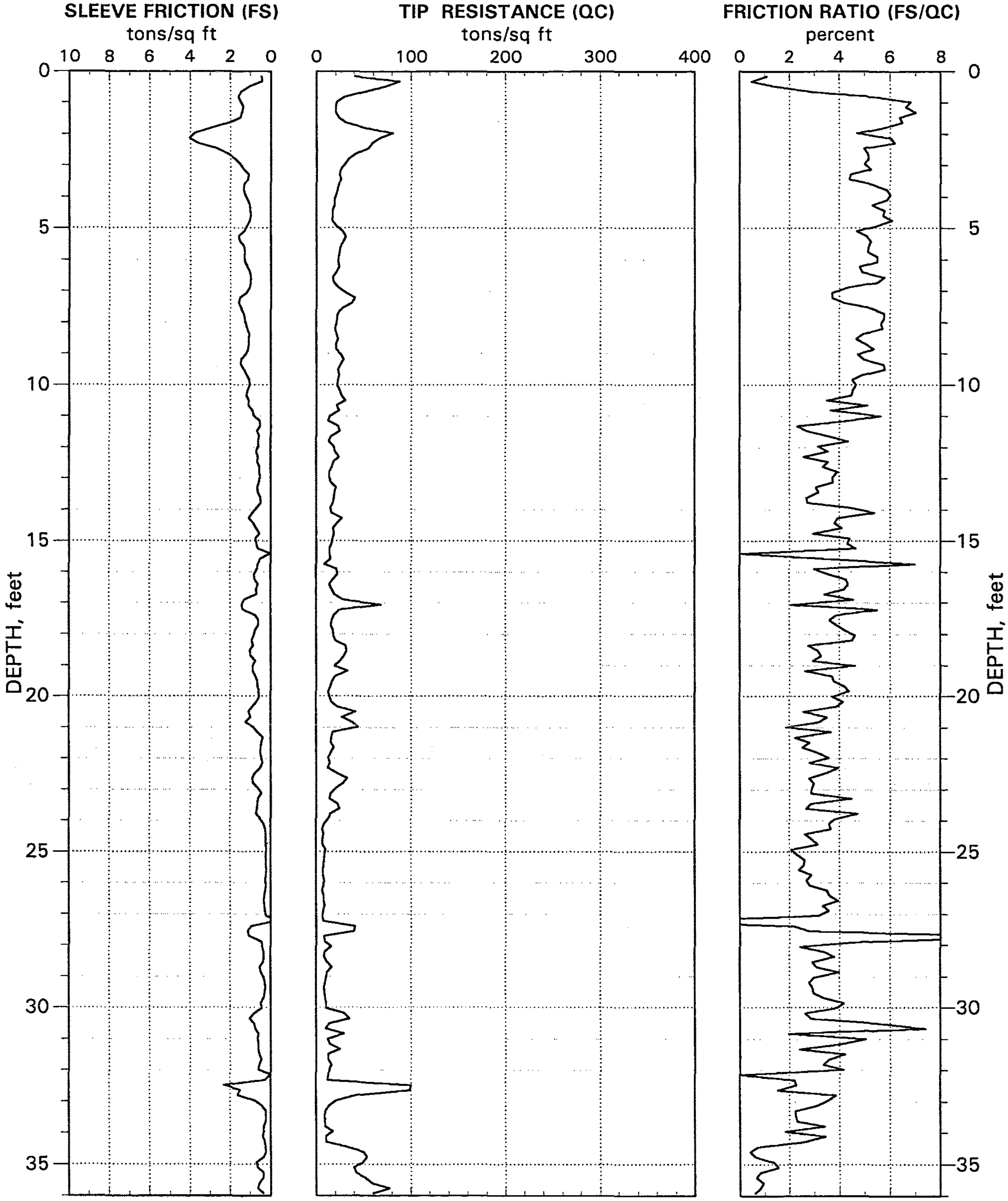

North: 603072
East: 1870092
Date: 4/15/98

Station: 7+960
Offset (m): 42
Surface Elevation: 17 feet (approx.)

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT

Project Number: 95-973017NB.00	CONE PENETRATION TEST SOUNDING NUMBER: EC03	Fig.F-3 Page 1 of 2

4/20/00 GUADE_CN GUADE

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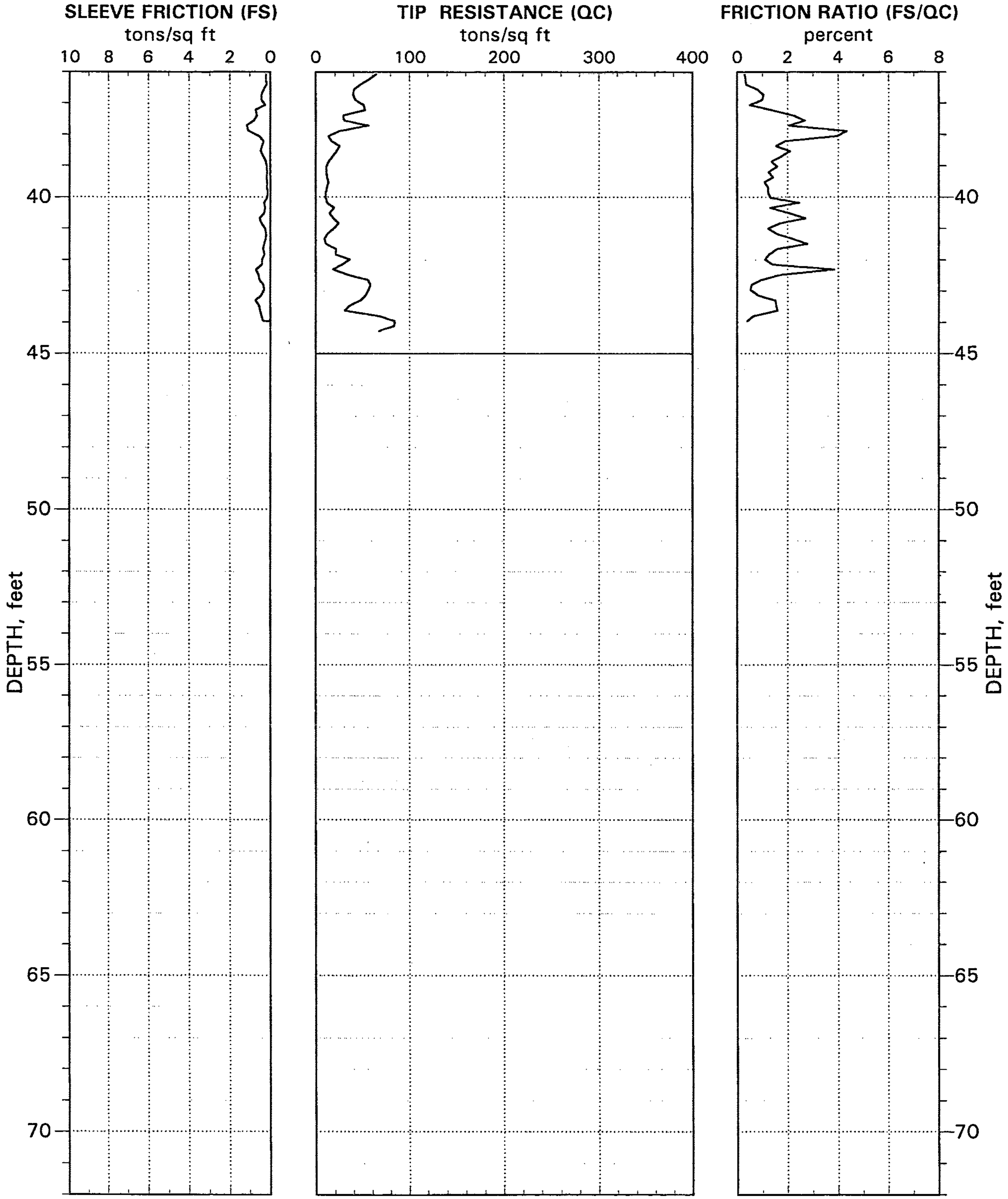

North: 603072
East: 1870092
Date: 4/15/98

Station: 7+960
Offset (m): 42
Surface Elevation: 17 feet (approx.)

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT

Project Number: 95-973017NB.00	CONE PENETRATION TEST SOUNDING NUMBER: EC03	Fig.F-3 Page 2 of 2

4/20/00 GUADE_CN GUADE

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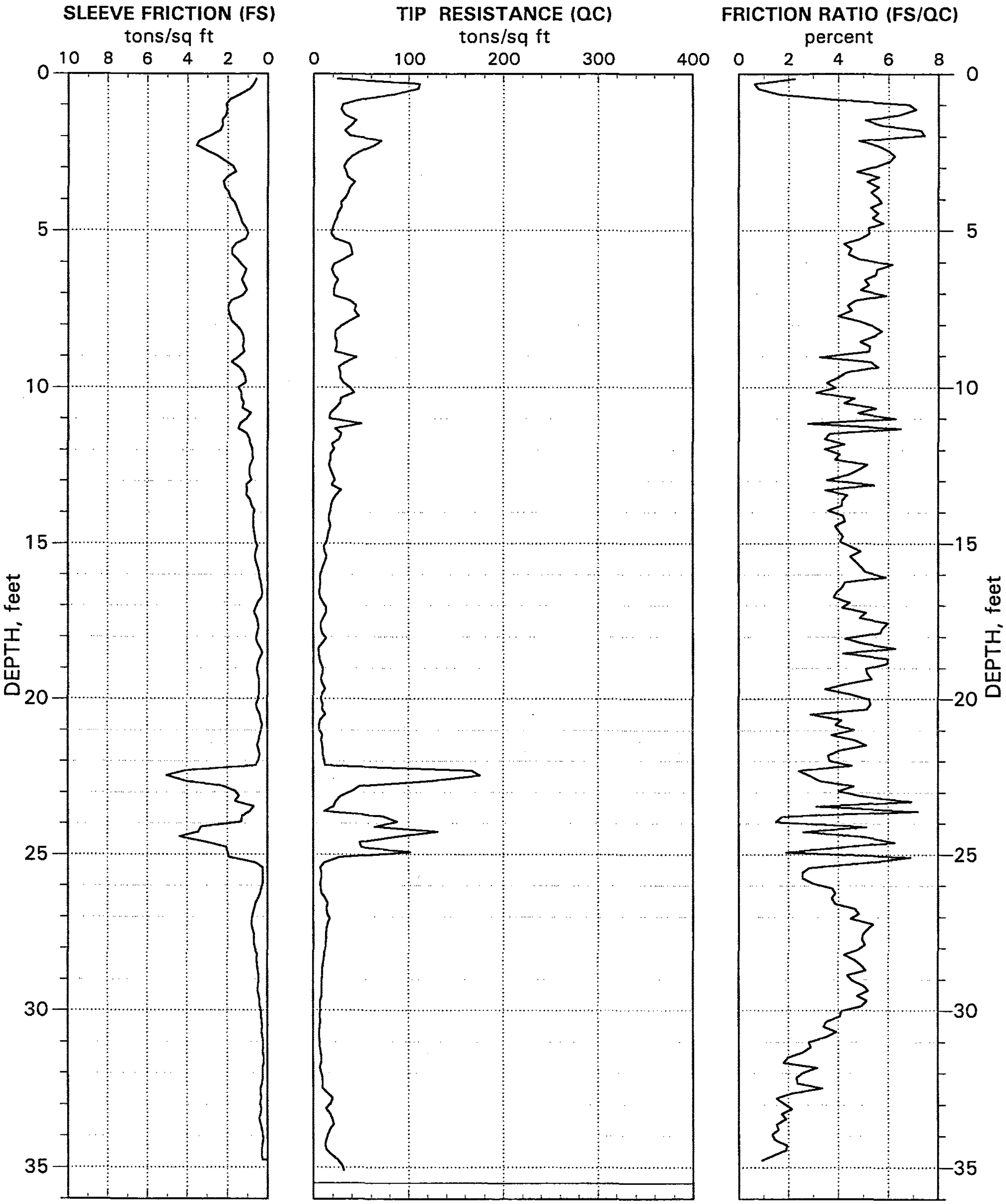

North: 603056
East: 1870099
Date: 4/15/98

Station: 7+976
Offset (m): 45
Surface Elevation: 17 feet (approx.)

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT

Project Number: 95-973017NB.00	**CONE PENETRATION TEST** **SOUNDING NUMBER: EC04**	**Fig.F-4** **Page 1 of 1**

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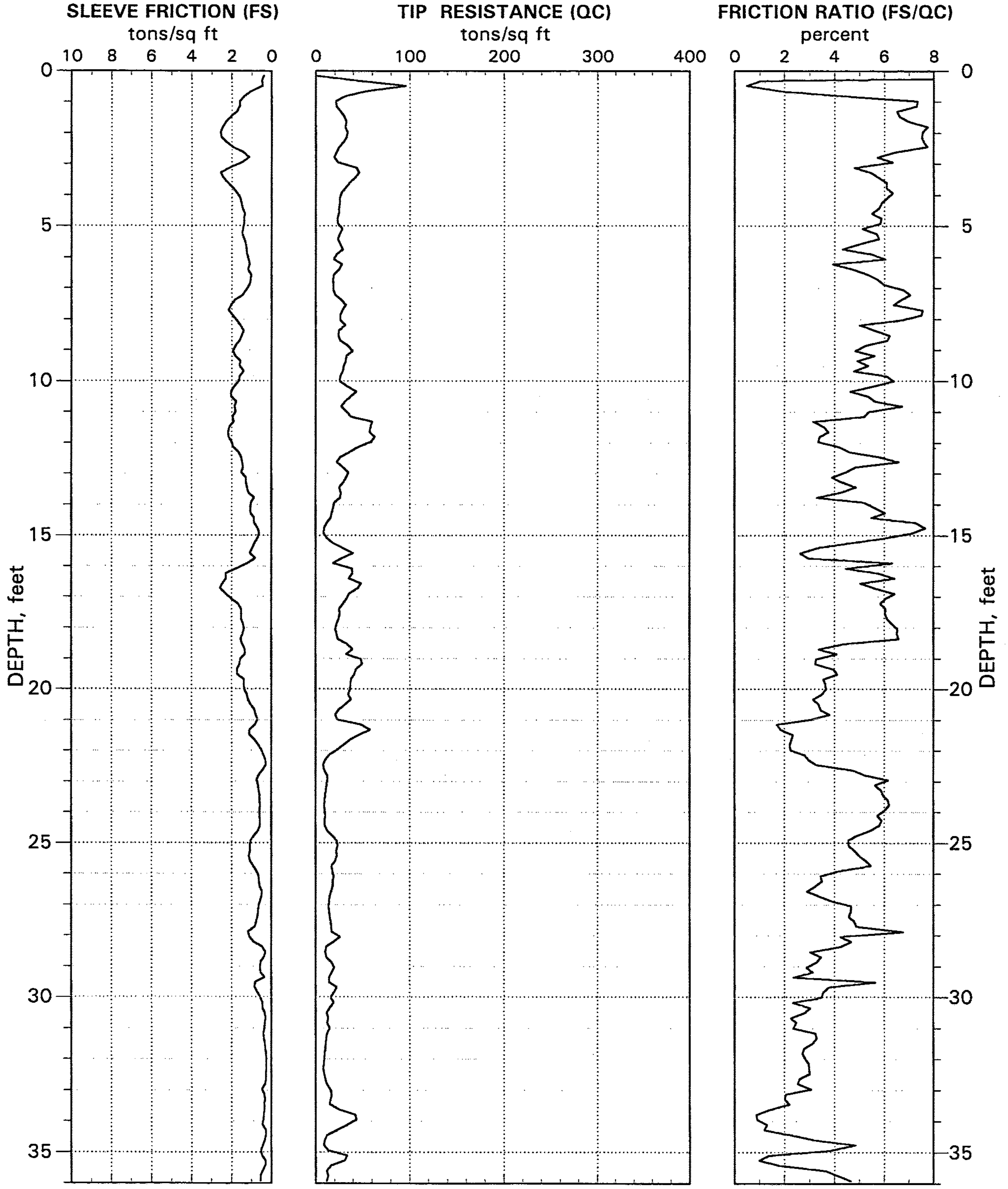
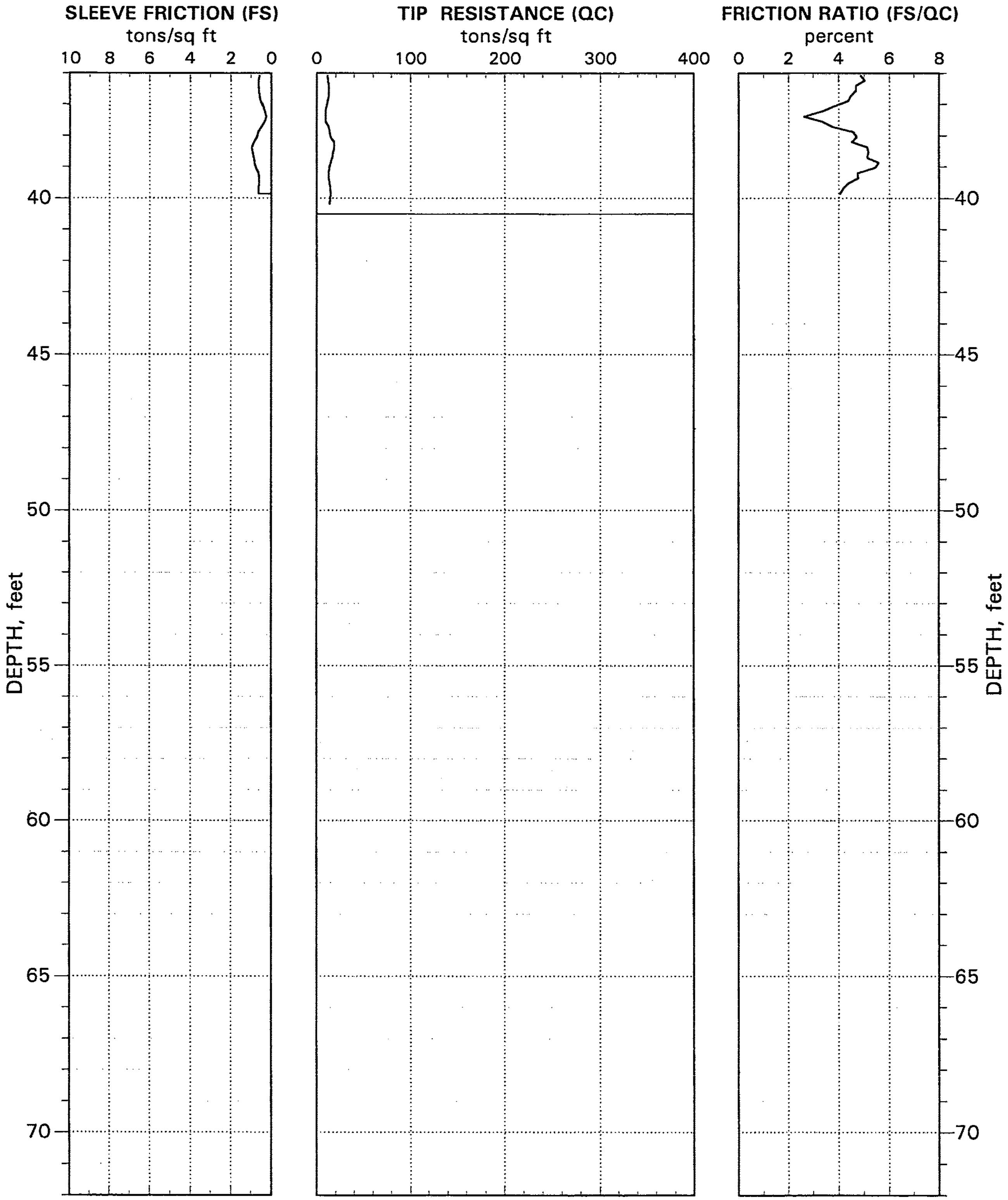


North: 602395
East: 1870479
Date: 4/13/98

Station: 8+763
Offset (m): 44
Surface Elevation: 20 feet (approx.)

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT

Project Number: 95-973017NB.00	CONE PENETRATION TEST SOUNDING NUMBER: EC05	Fig.F-5 Page 1 of 2



North: 602395
East: 1870479
Date: 4/13/98

Station: 8+763
Offset (m): 44
Surface Elevation: 20 feet (approx.)

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT

Project Number: 95-973017NB.00	**CONE PENETRATION TEST** **SOUNDING NUMBER: EC05**	**Fig.F-5** **Page 2 of 2**

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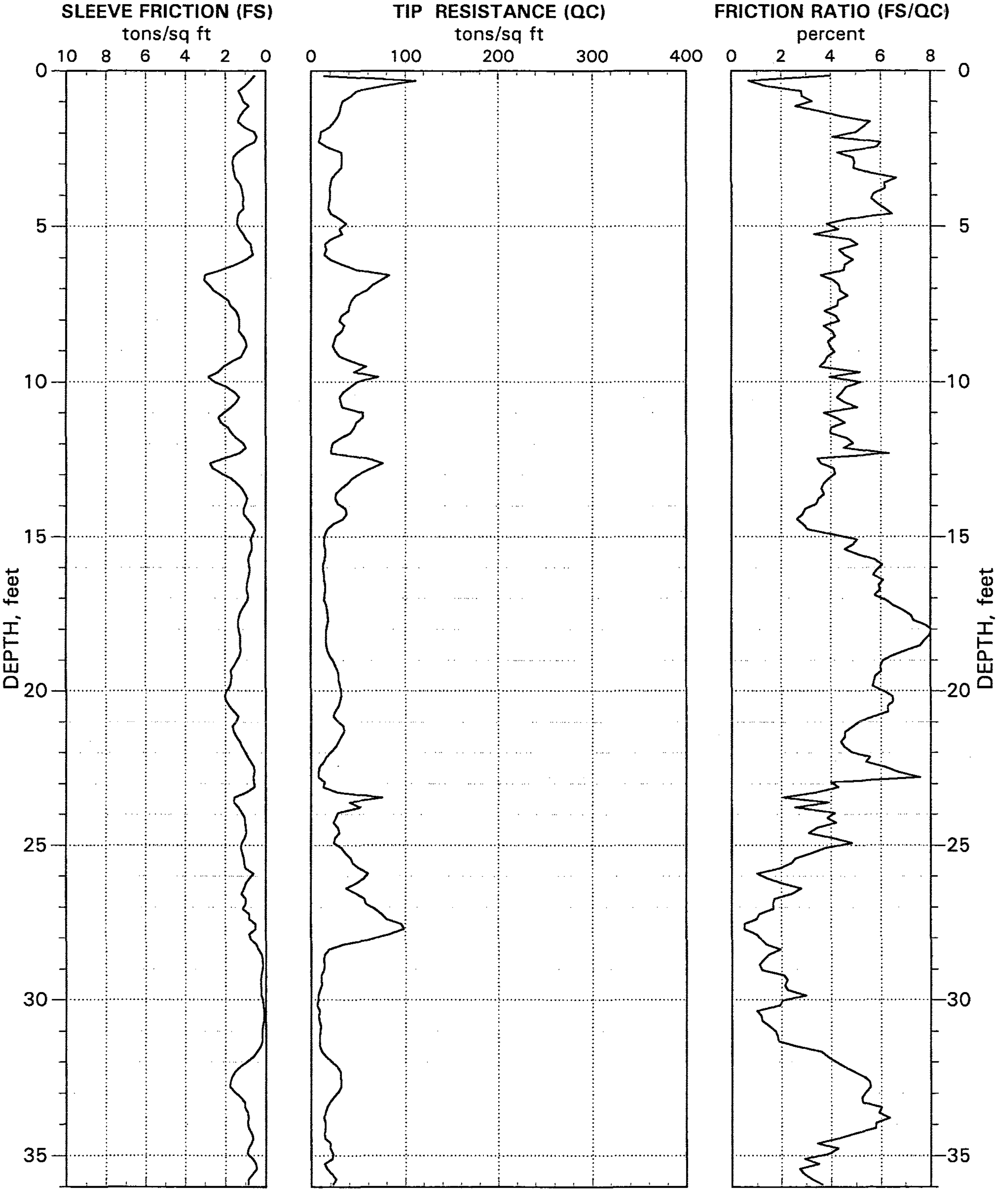


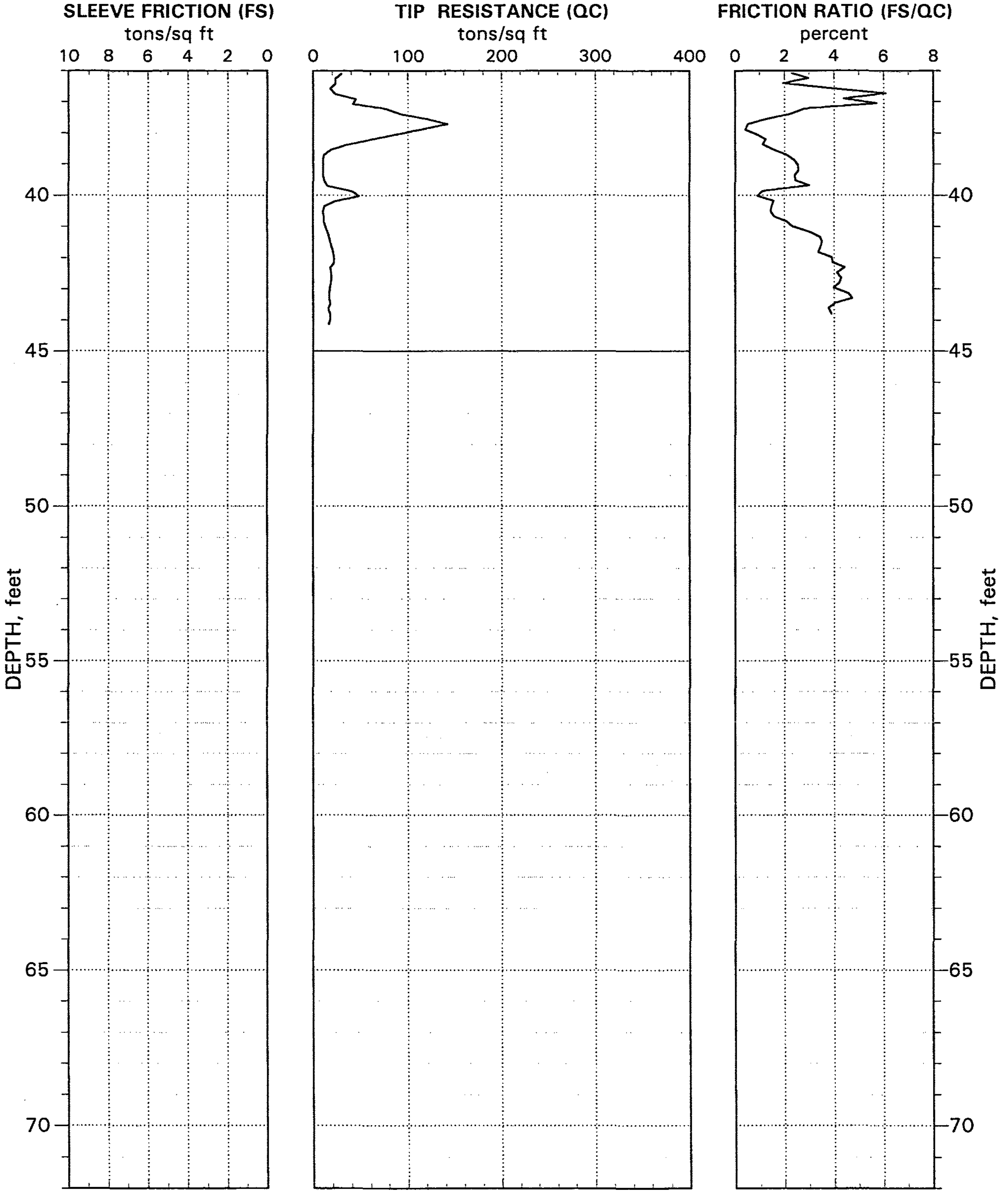
North: 601347
East: 1871574
Date: 4/13/98

Station: 10+329
Offset (m): 45
Surface Elevation: 22 feet (approx.)

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT

Project Number: 95-973017NB.00	CONE PENETRATION TEST SOUNDING NUMBER: EC06	Fig.F-6 Page 1 of 2

URS Greiner Woodward Clyde



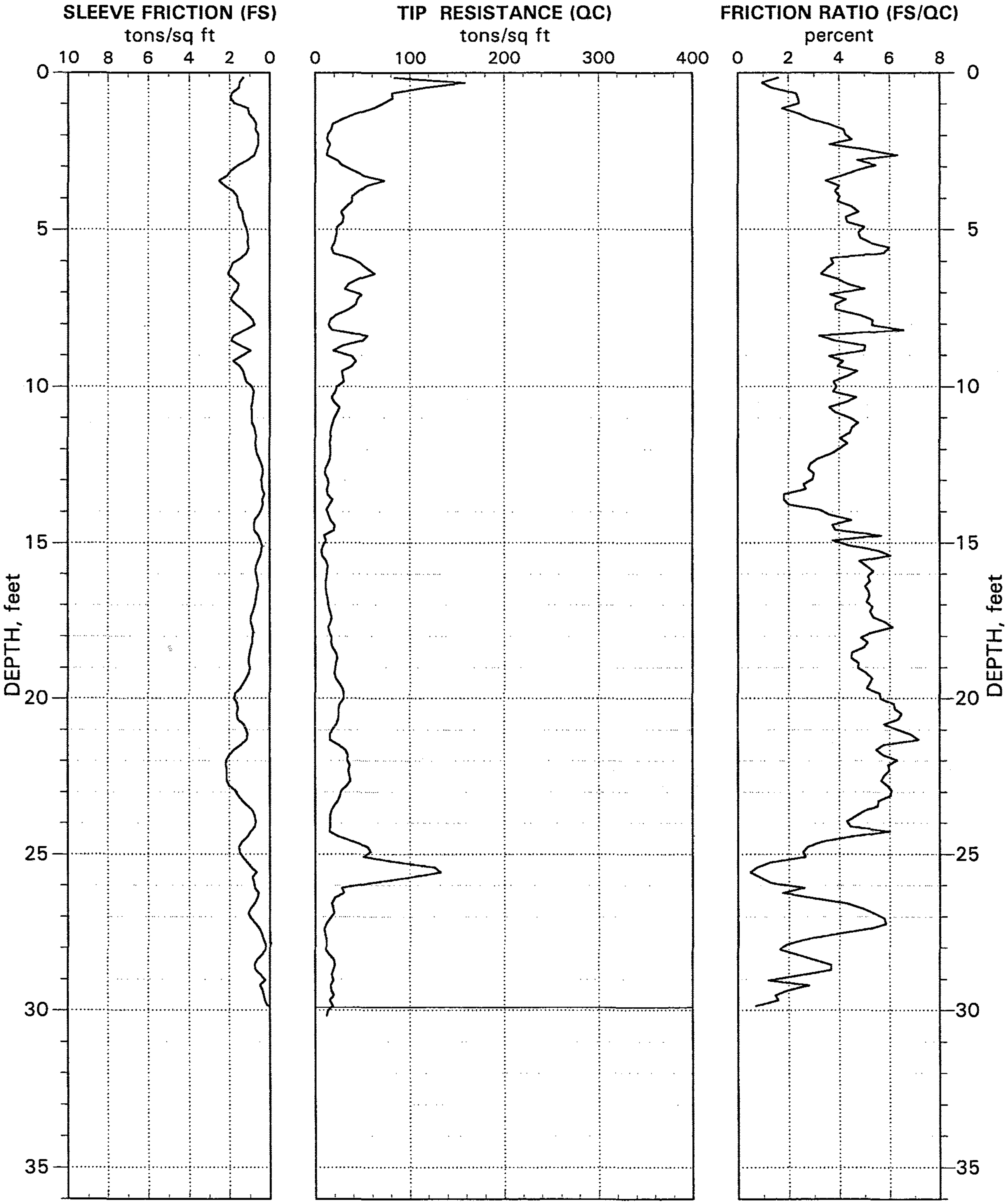
North: 601347
East: 1871574
Date: 4/13/98

Station: 10+329
Offset (m): 45
Surface Elevation: 22 feet (approx.)

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT

Project Number: 95-973017NB.00	CONE PENETRATION TEST SOUNDING NUMBER: EC06	Fig.F-6 Page 2 of 2

URS Greiner Woodward Clyde



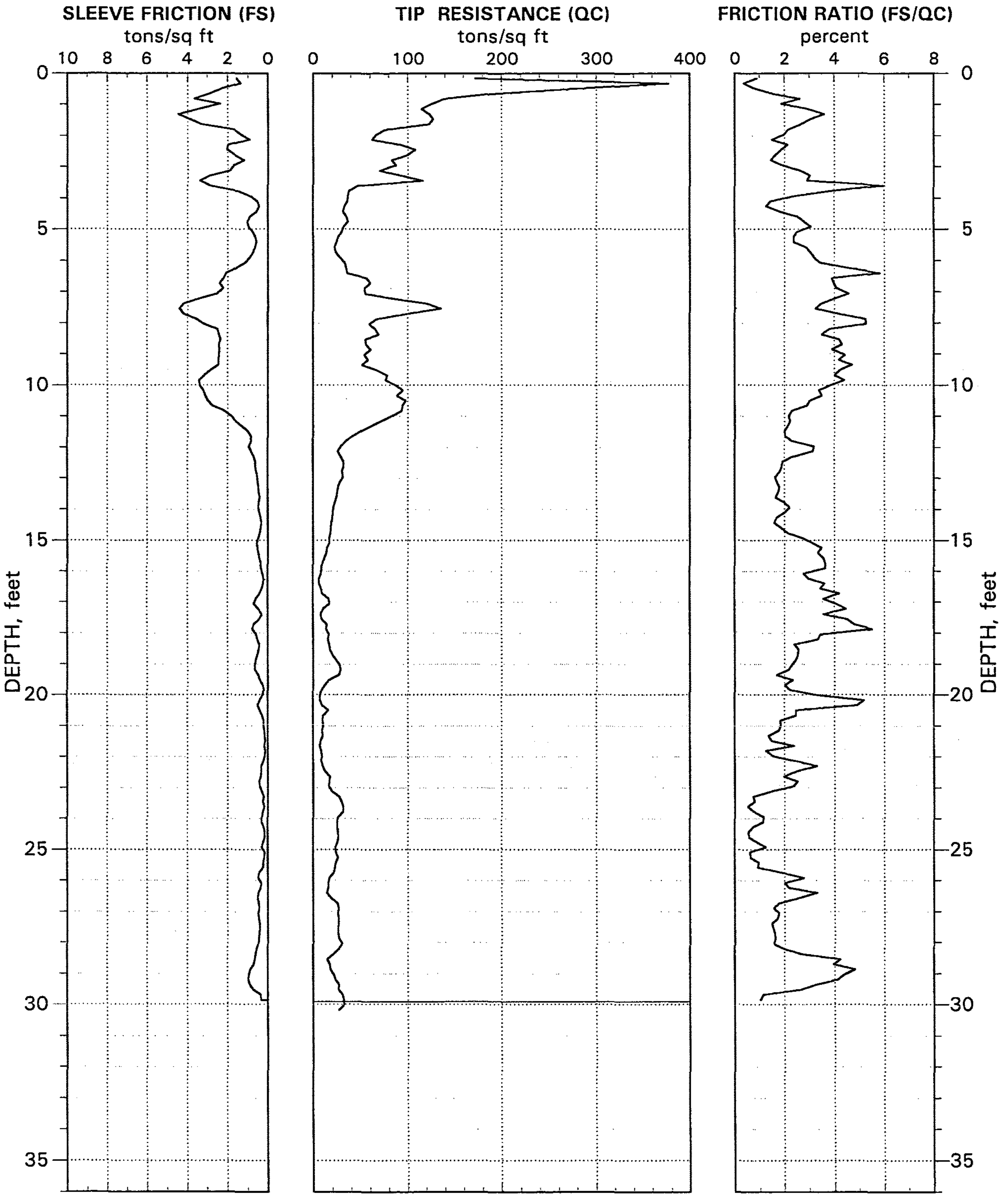
North: 600687
East: 1872383
Date: 4/13/98

Station: 11+496
Offset (m): 43
Surface Elevation: 25 feet (approx.)

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT

Project Number: 95-973017NB.00	CONE PENETRATION TEST SOUNDING NUMBER: EC07	Fig.F-7 Page 1 of 1

URS Greiner Woodward Clyde



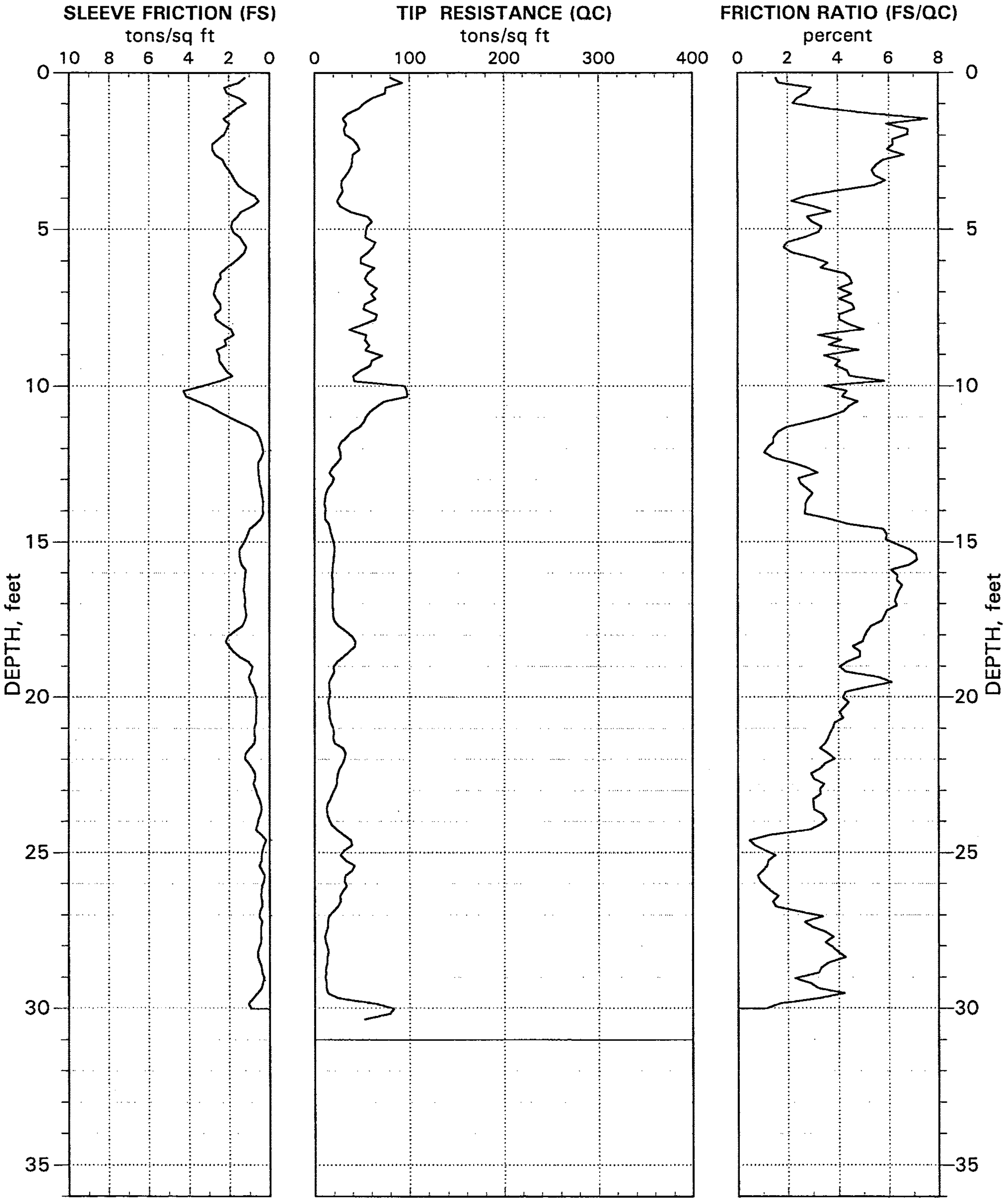
North: 600433
East: 1872450
Date: 4/13/98

Station: 11+795
Offset (m): 43
Surface Elevation: 25 feet (approx.)

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT

Project Number: 95-973017NB.00	CONE PENETRATION TEST SOUNDING NUMBER: EC08	Fig.F-8 Page 1 of 1

URS Greiner Woodward Clyde



North: 600240
East: 1872560
Date: 4/14/98

Station: 11+993
Offset (m): 63
Surface Elevation: 26 feet (approx.)

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT

Project Number: 95-973017NB.00	CONE PENETRATION TEST SOUNDING NUMBER: EC09	Fig.F-9 Page 1 of 1

4/20/00 GUADE_CN GUADE

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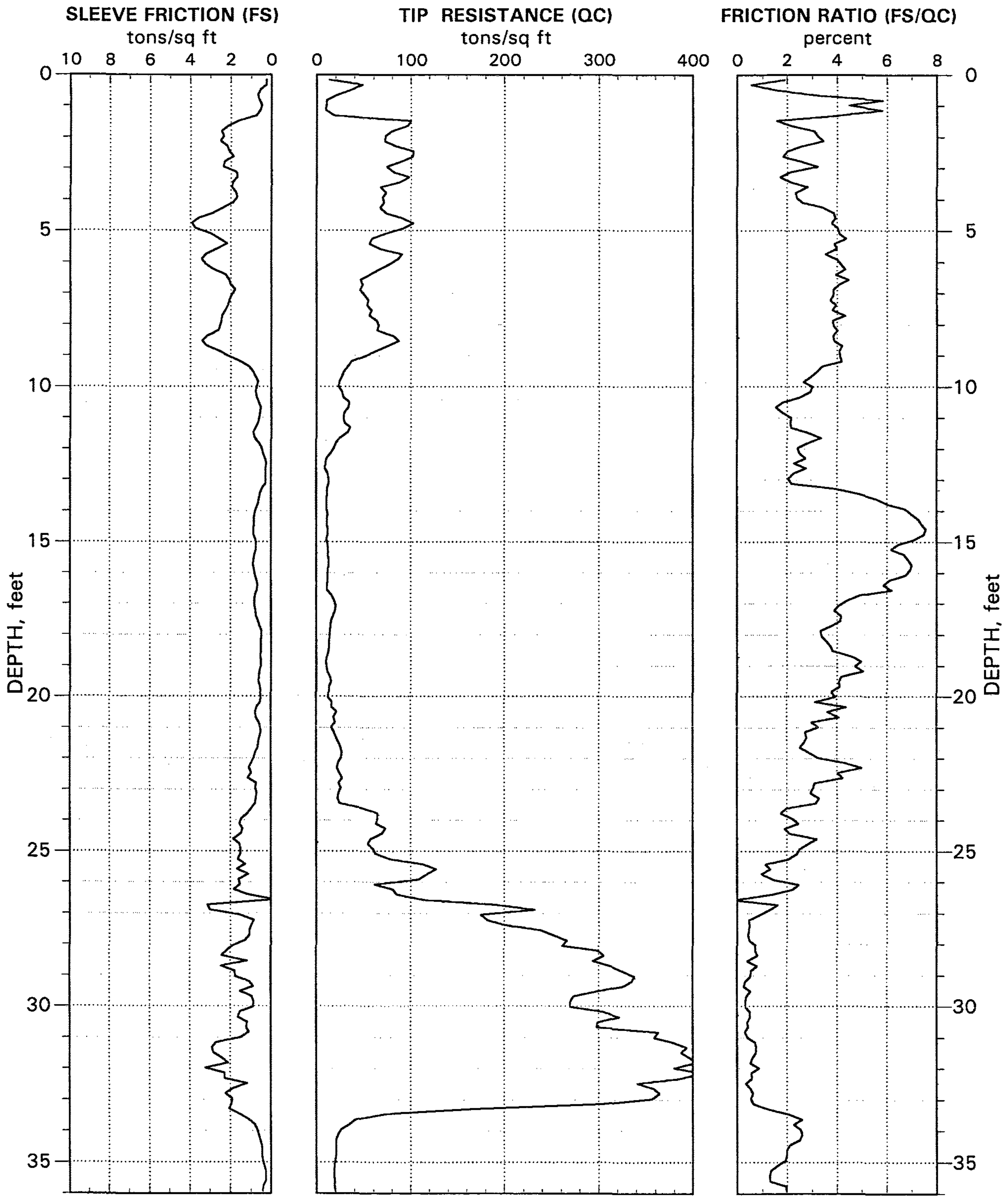


North: 599578
East: 1872803
Date: 4/14/98

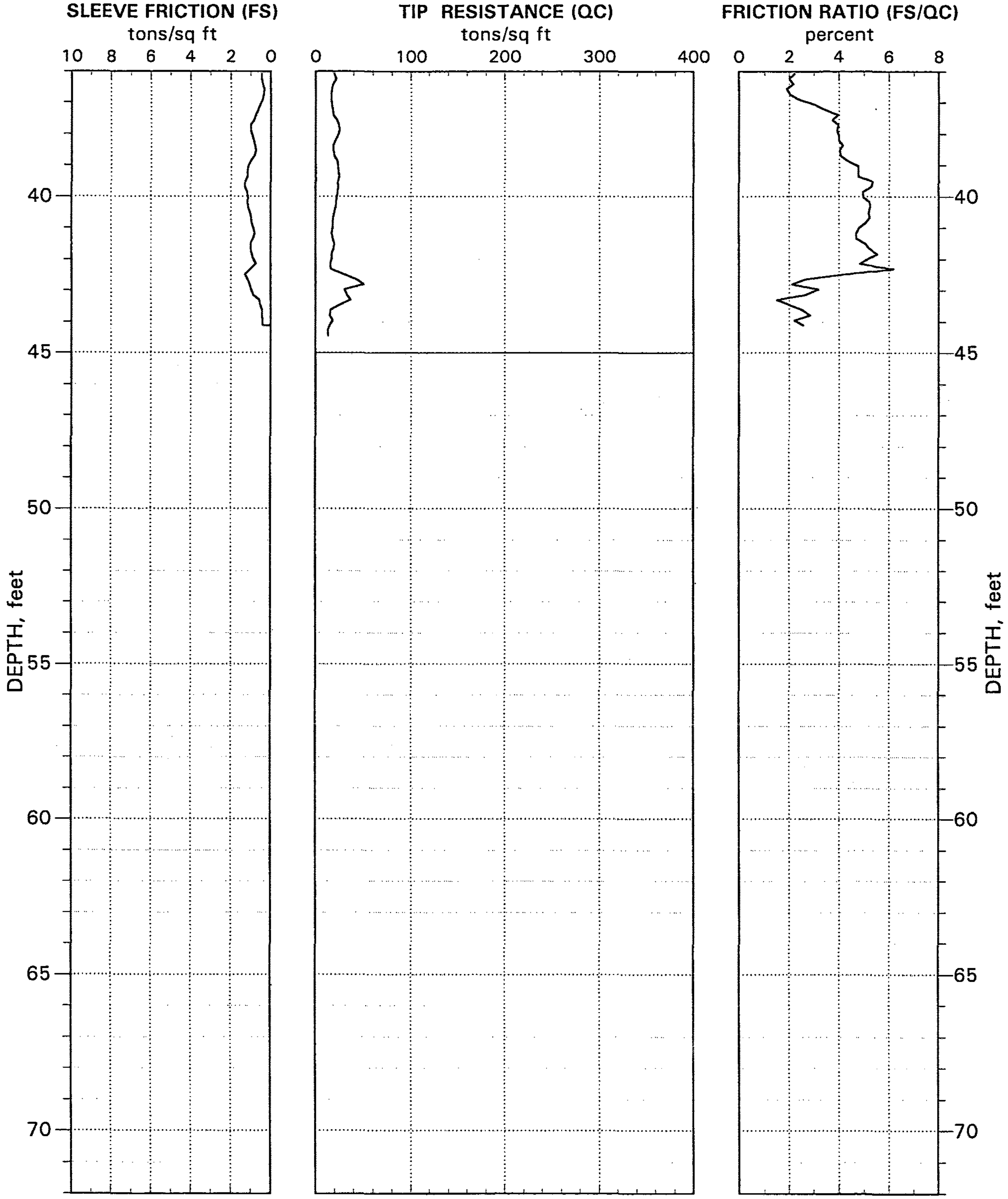
Station: 12+778
Offset (m): 82
Surface Elevation: 28 feet (approx.)

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT

Project Number: 95-973017NB.00	CONE PENETRATION TEST SOUNDING NUMBER: EC10	Fig.F-10 Page 1 of 2

4/20/00 GUADE_CN GUADE

URS Greiner Woodward Clyde



North: 599578
East: 1872803
Date: 4/14/98

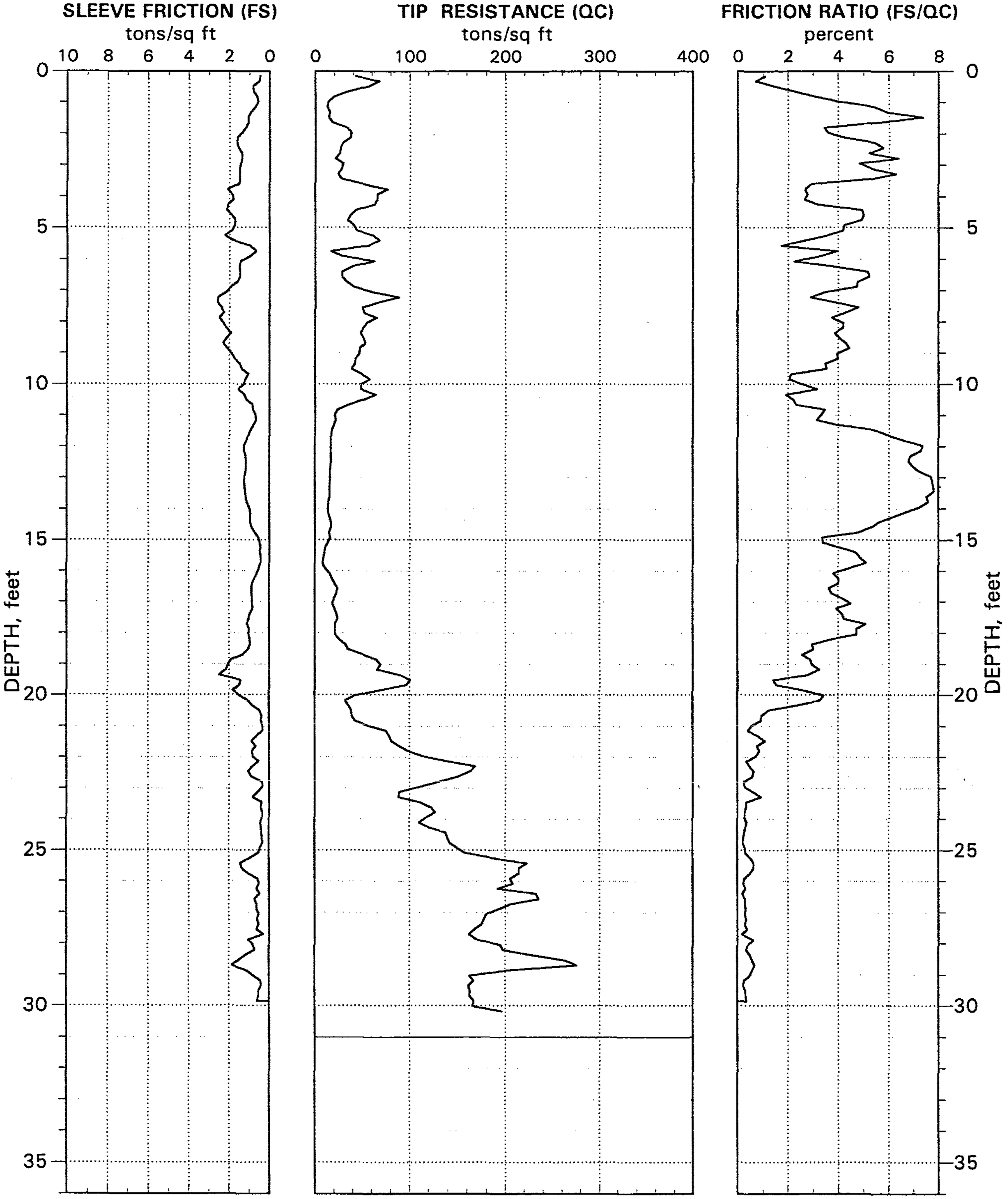
Station: 12+778
Offset (m): 82
Surface Elevation: 28 feet (approx.)

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT

Project Number: 95-973017NB.00	CONE PENETRATION TEST SOUNDING NUMBER: EC10	Fig.F-10 Page 2 of 2

4/20/00 GUADE_CN GUADE

URS Greiner Woodward Clyde



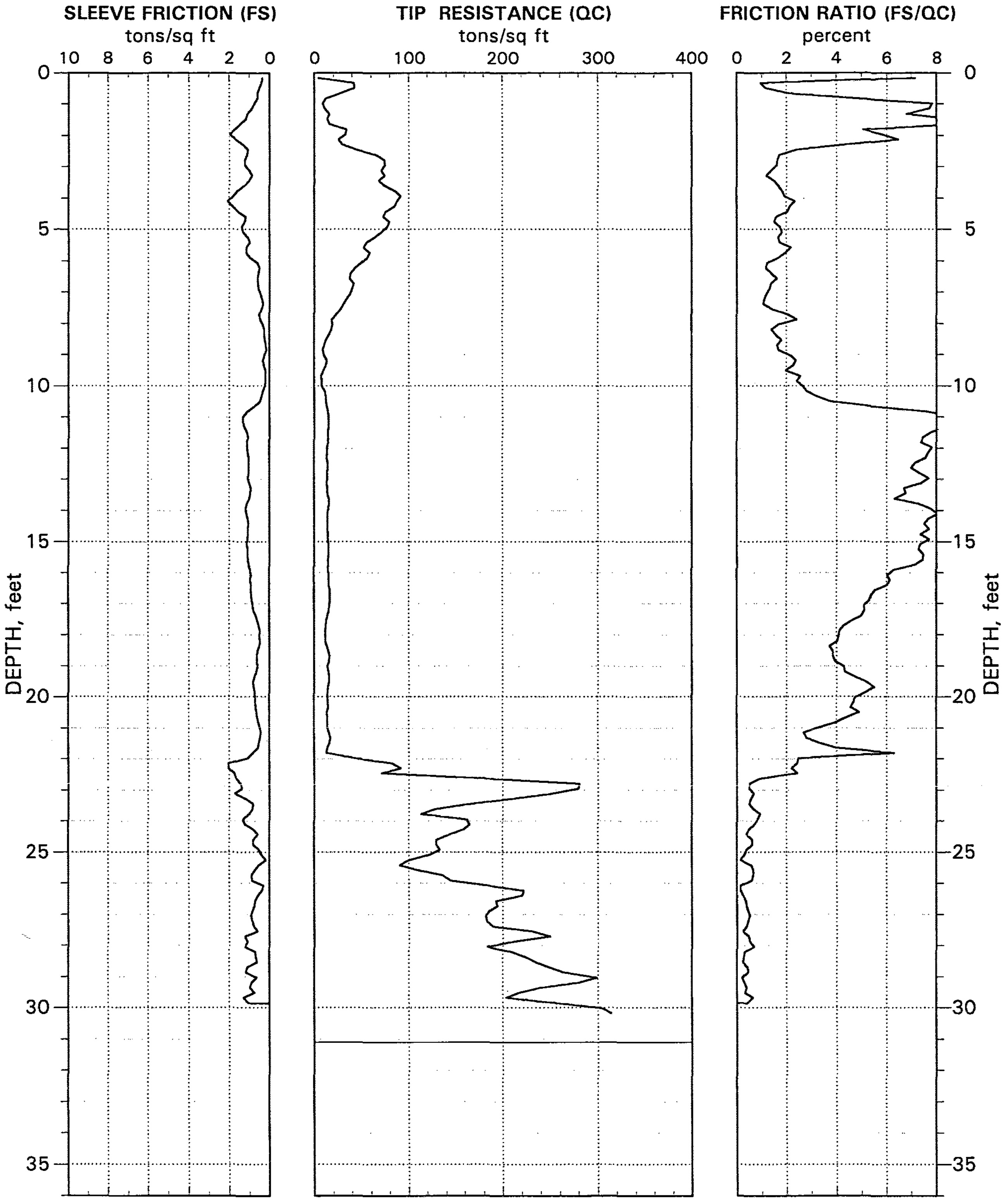
North: 599307
East: 1872924
Date: 4/14/98

Station: 13+024
Offset (m): 78
Surface Elevation: 29 feet (approx.)

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT

Project Number: 95-973017NB.00	CONE PENETRATION TEST SOUNDING NUMBER: EC11	Fig.F-11 Page 1 of 1

URS Greiner Woodward Clyde



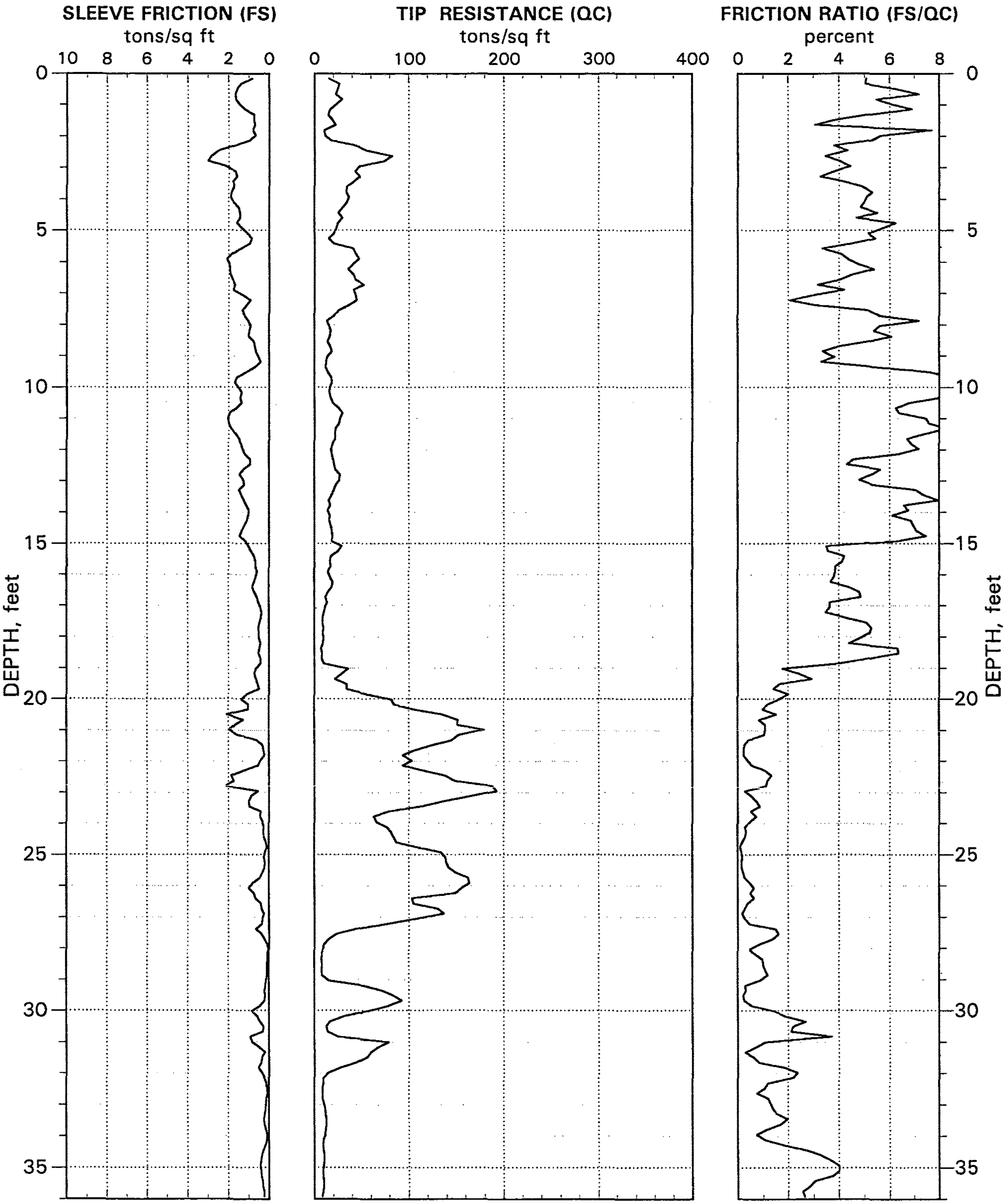
North: 598932
East: 1872797
Date: 4/14/98

Station: 13+377
Offset (m): 78
Surface Elevation: 30 feet (approx.)

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT

Project Number: 95-973017NB.00	CONE PENETRATION TEST SOUNDING NUMBER: EC12	Fig.F-12 Page 1 of 1

URS Greiner Woodward Clyde



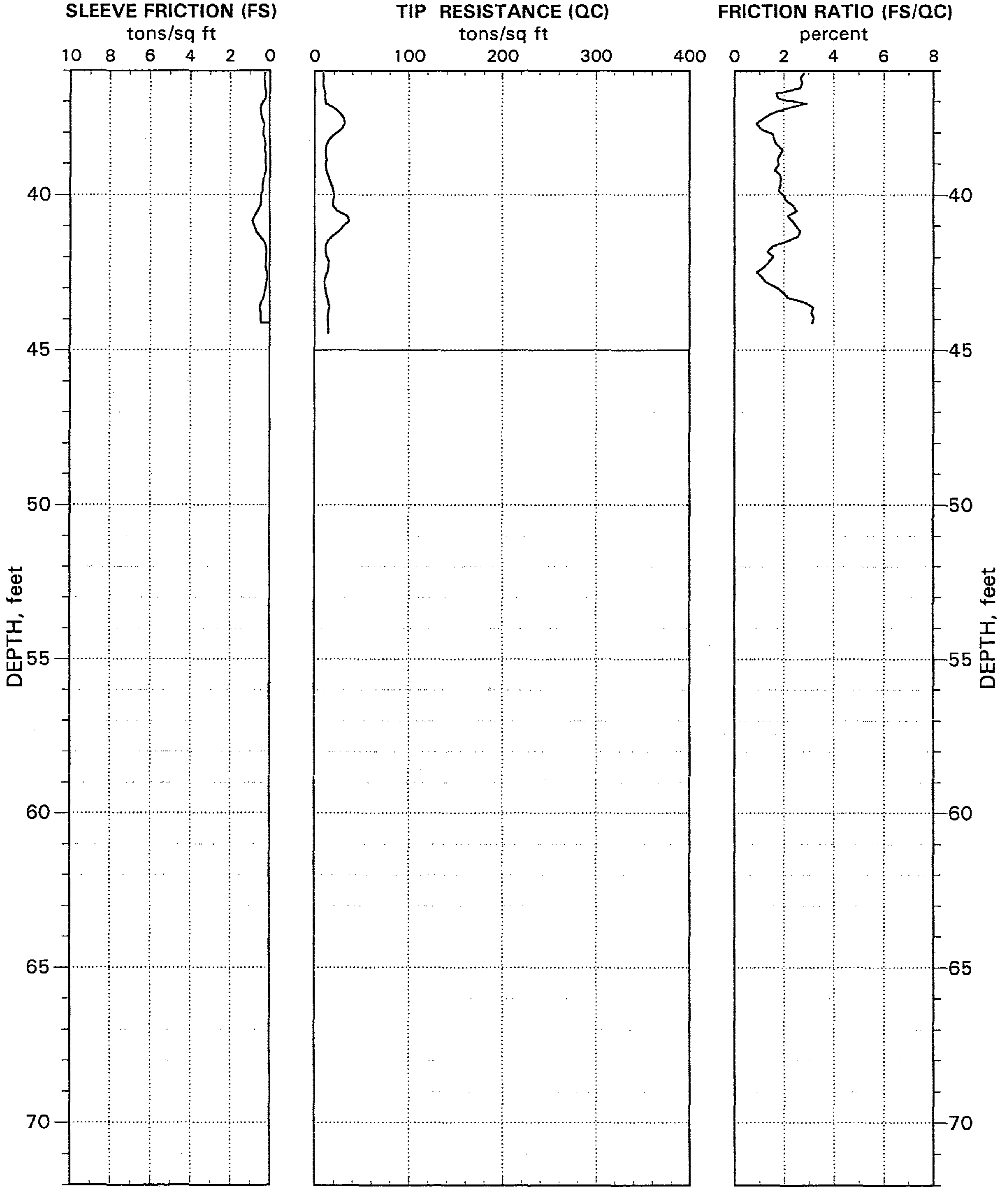
North: 597783
East: 1873359
Date: 4/16/98

Station: 14+981
Offset (m): 42
Surface Elevation: 41 feet (approx.)

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT

Project Number: 95-973017NB.00	CONE PENETRATION TEST SOUNDING NUMBER: EC13	Fig.F-13 Page 1 of 2

URS Greiner Woodward Clyde



North: 597783
East: 1873359
Date: 4/16/98

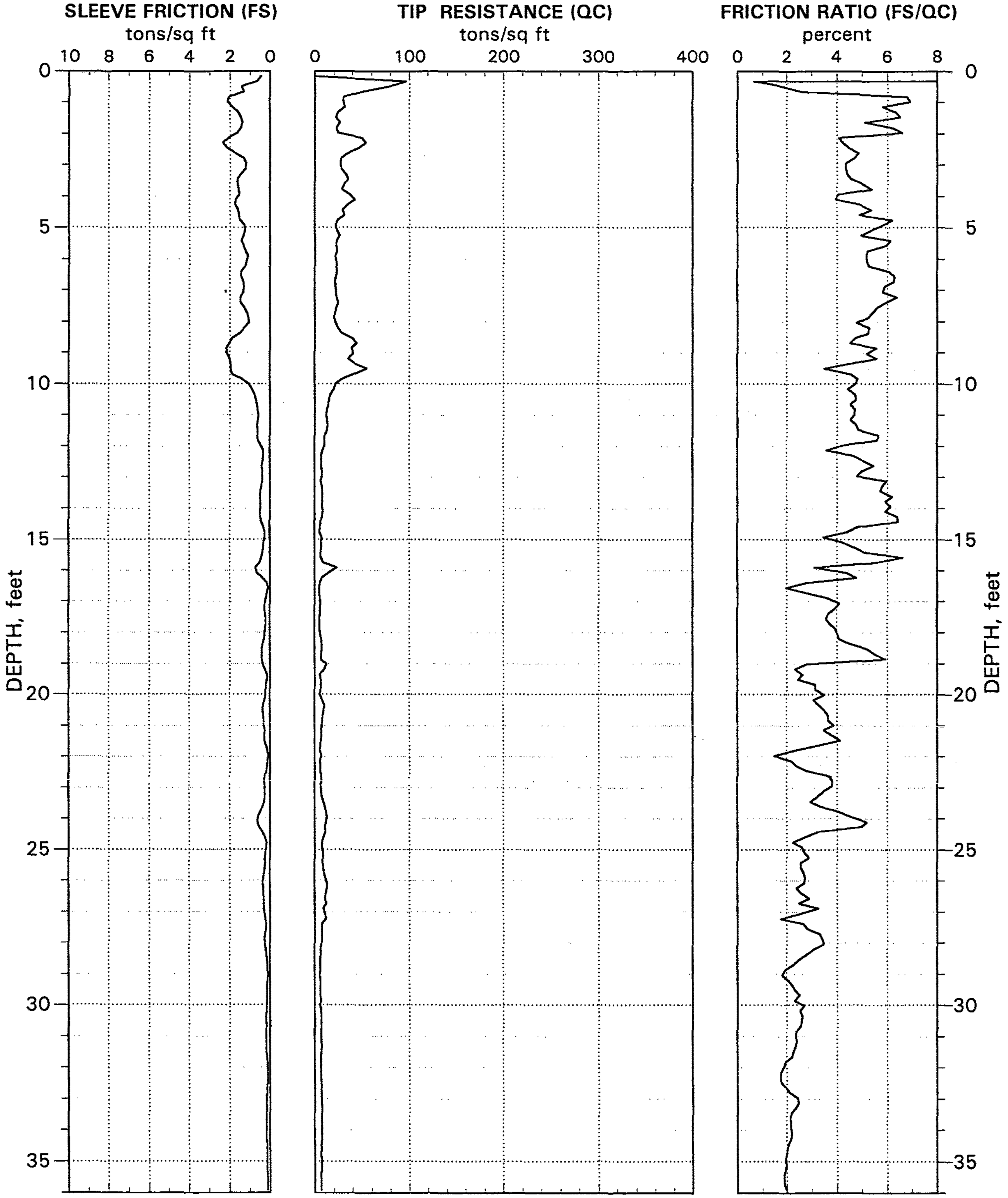
Station: 14+981
Offset (m): 42
Surface Elevation: 41 feet (approx.)

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT

Project Number: 95-973017NB.00	CONE PENETRATION TEST SOUNDING NUMBER: EC13	Fig.F-13 Page 2 of 2

4/20/00 GUADE_CN GUADE

URS Greiner Woodward Clyde



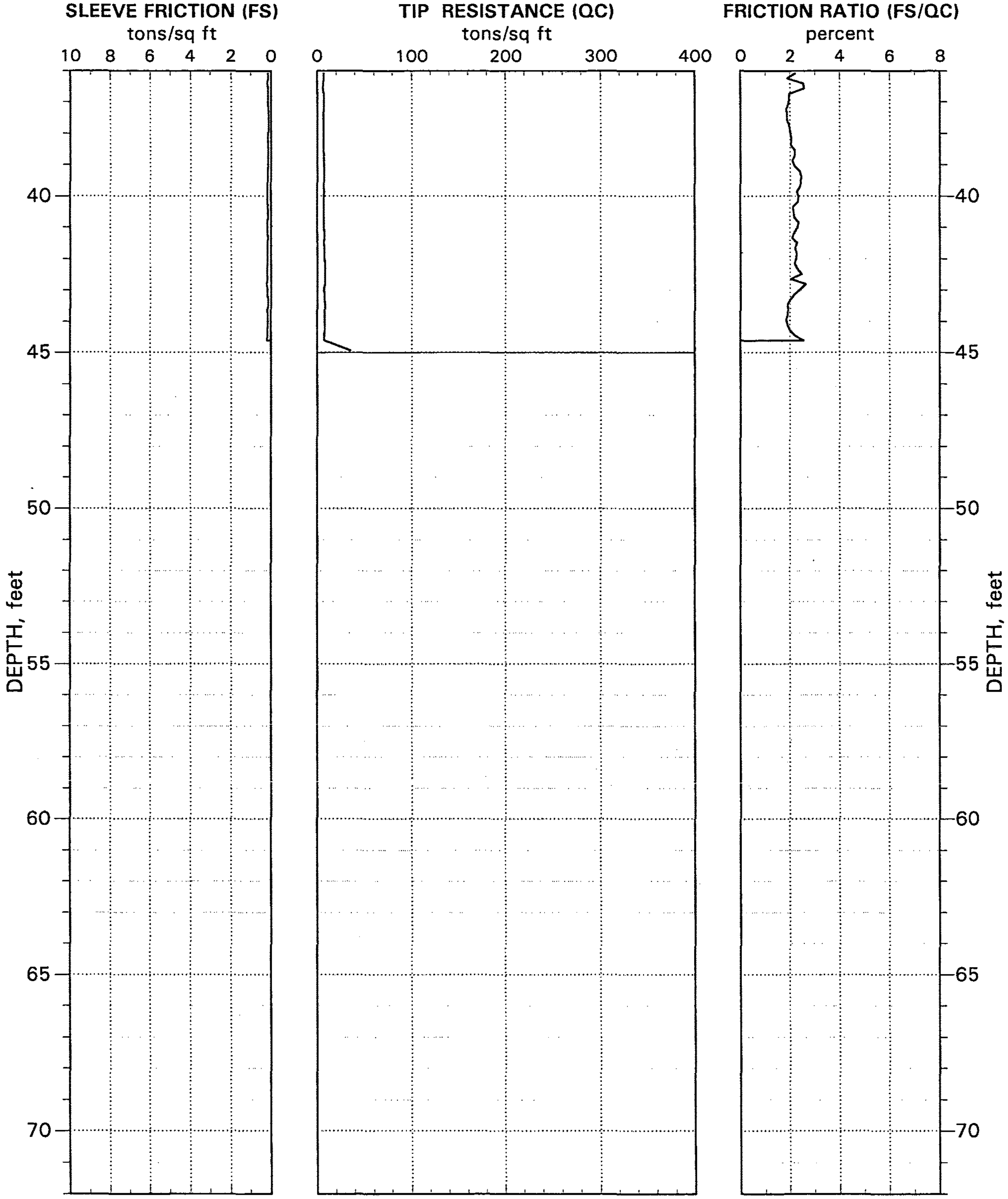
North: 603234
East: 1869889
Date: 4/15/98

Station: 7+710
Offset (m): -46
Surface Elevation: 16 feet (approx.)

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT

Project Number: 95-973017NB.00	CONE PENETRATION TEST SOUNDING NUMBER: WC01	Fig.F-14 Page 1 of 2

URS Greiner Woodward Clyde



North: 603234
East: 1869889
Date: 4/15/98

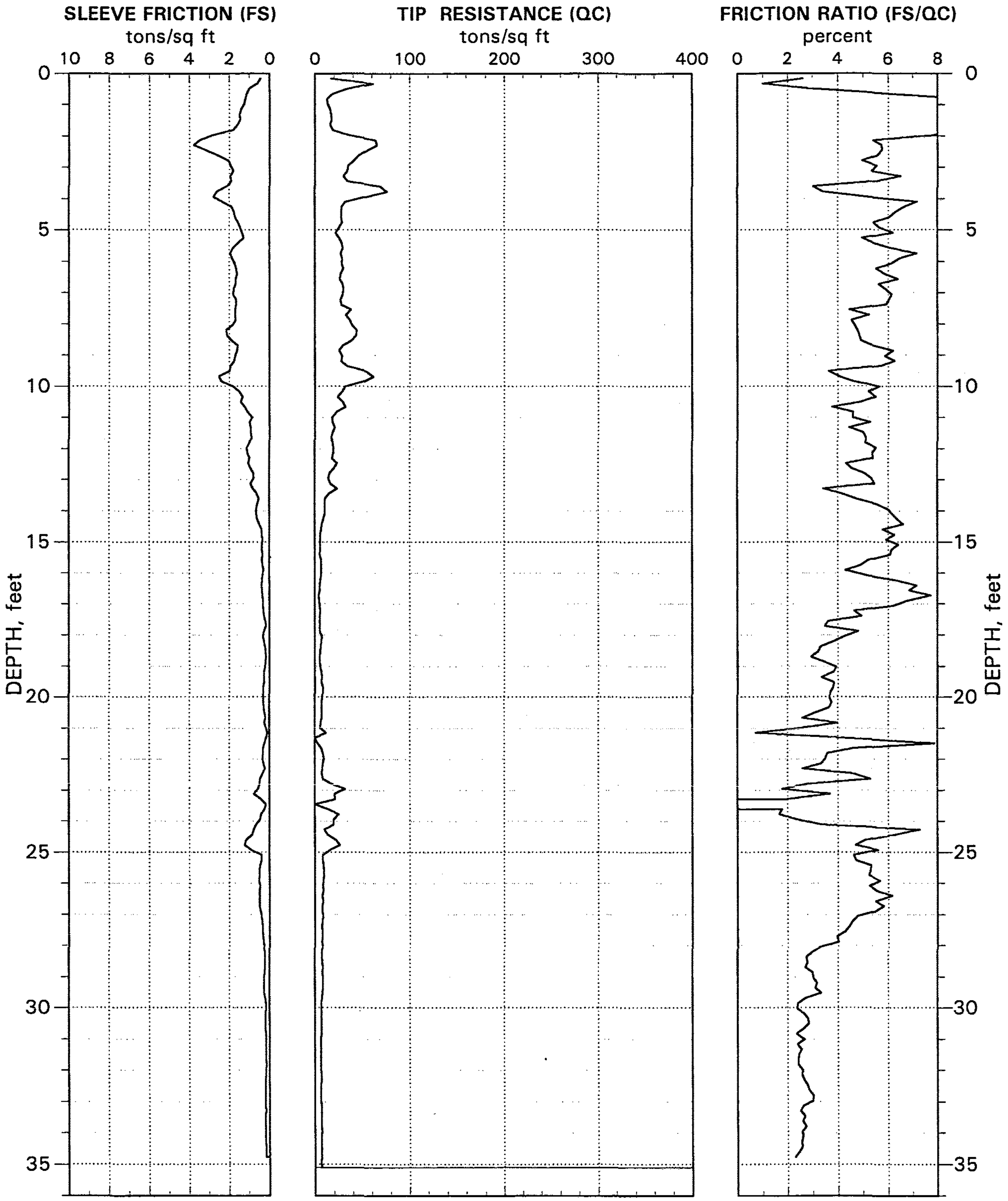
Station: 7+710
Offset (m): -46
Surface Elevation: 16 feet (approx.)

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT

Project Number: 95-973017NB.00	CONE PENETRATION TEST SOUNDING NUMBER: WC01	Fig.F-14 Page 2 of 2

4/20/00 GUADE_CN GUADE

URS Greiner Woodward Clyde



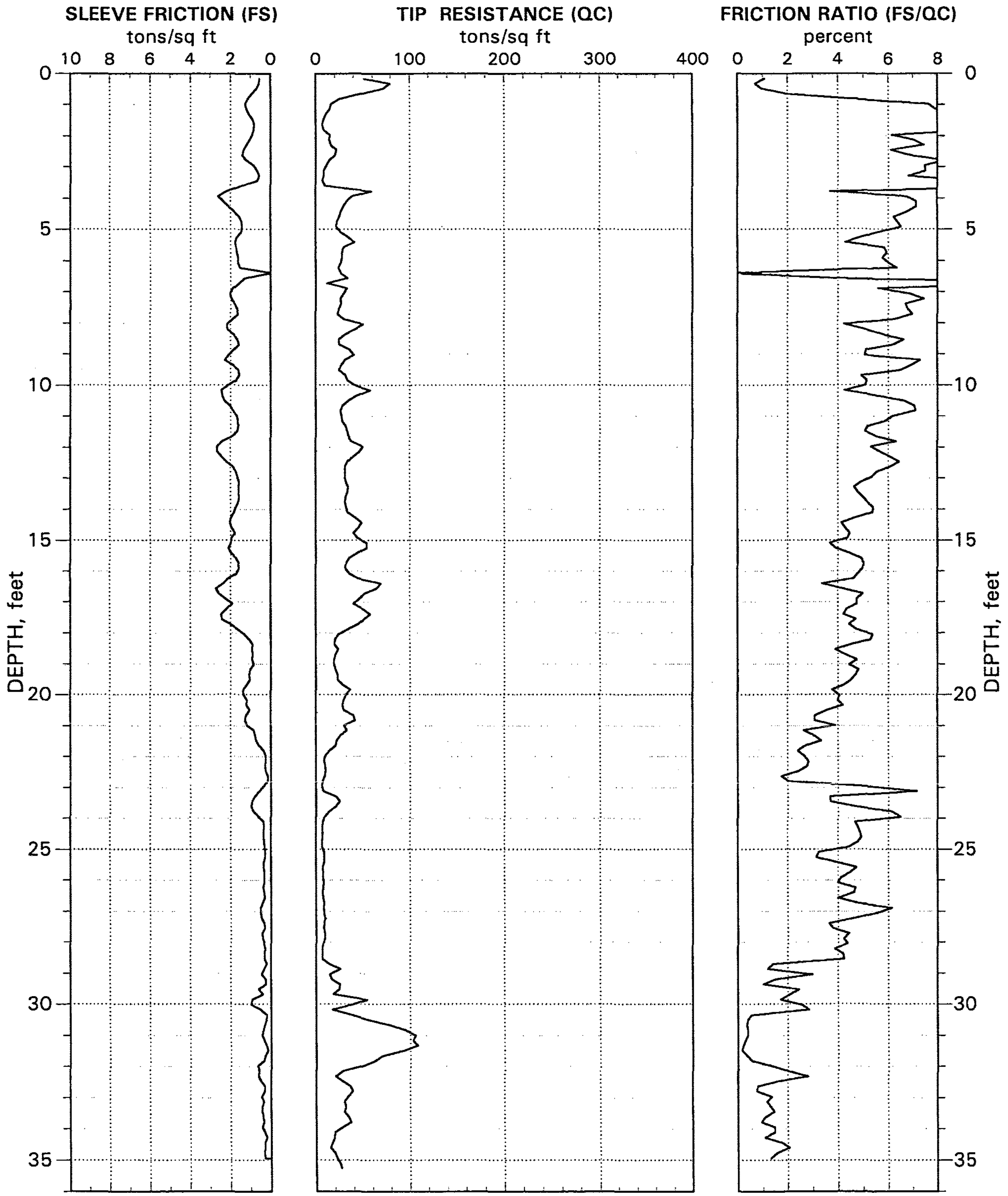
North: 603063
East: 1870009
Date: 4/15/98

Station: 7+945
Offset (m): -41
Surface Elevation: 17 feet (approx.)

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT

Project Number: 95-973017NB.00	CONE PENETRATION TEST SOUNDING NUMBER: WC02	Fig.F-15 Page 1 of 1

URS Greiner Woodward Clyde



North: 601984
East: 1870659
Date: 4/13/98

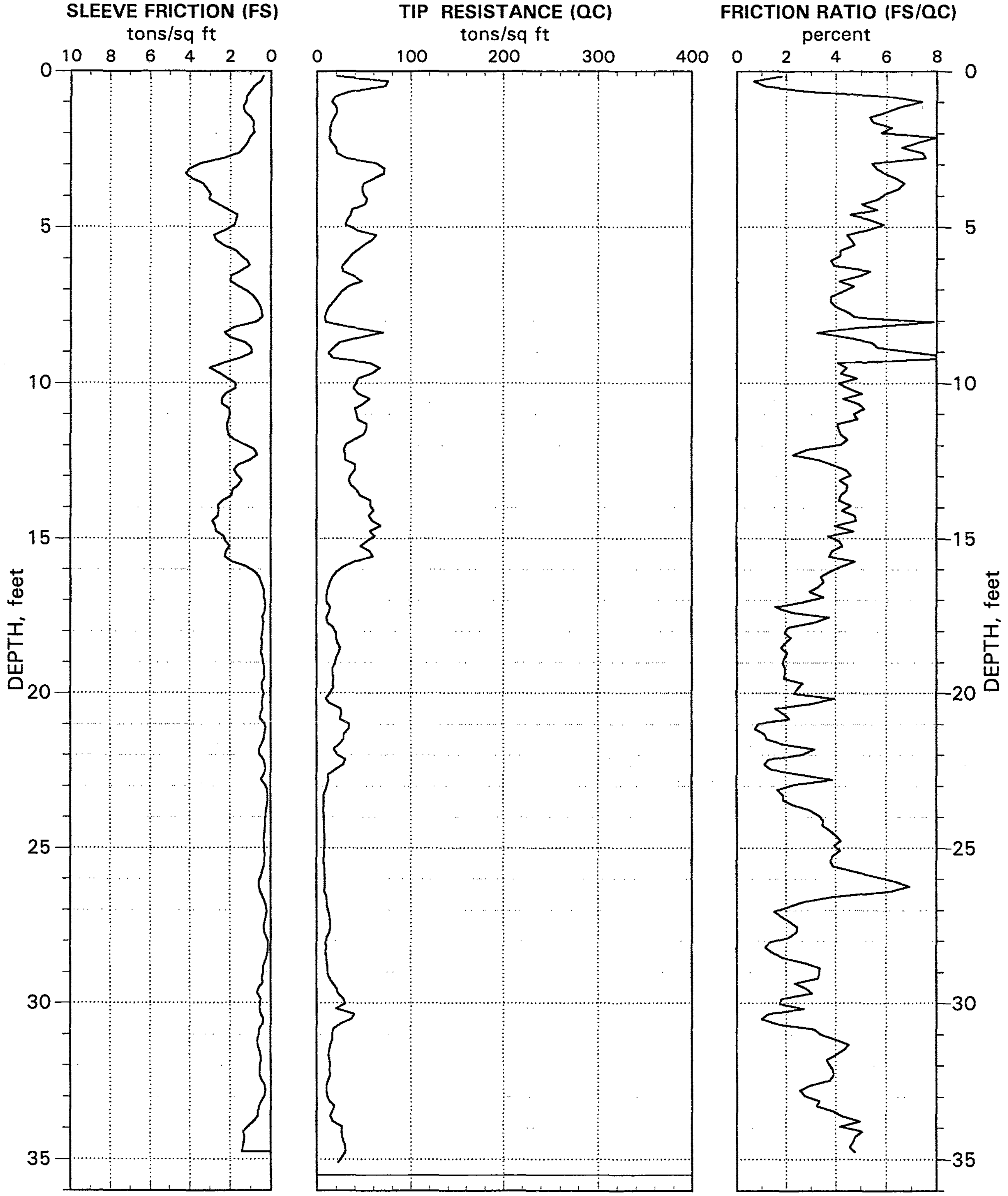
Station: 9+194
Offset (m): -49
Surface Elevation: 21 feet (approx.)

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT

Project Number: 95-973017NB.00	CONE PENETRATION TEST SOUNDING NUMBER: WC03	Fig.F-16 Page 1 of 1

4/20/00 GUADE_CN GUADE

URS Greiner Woodward Clyde



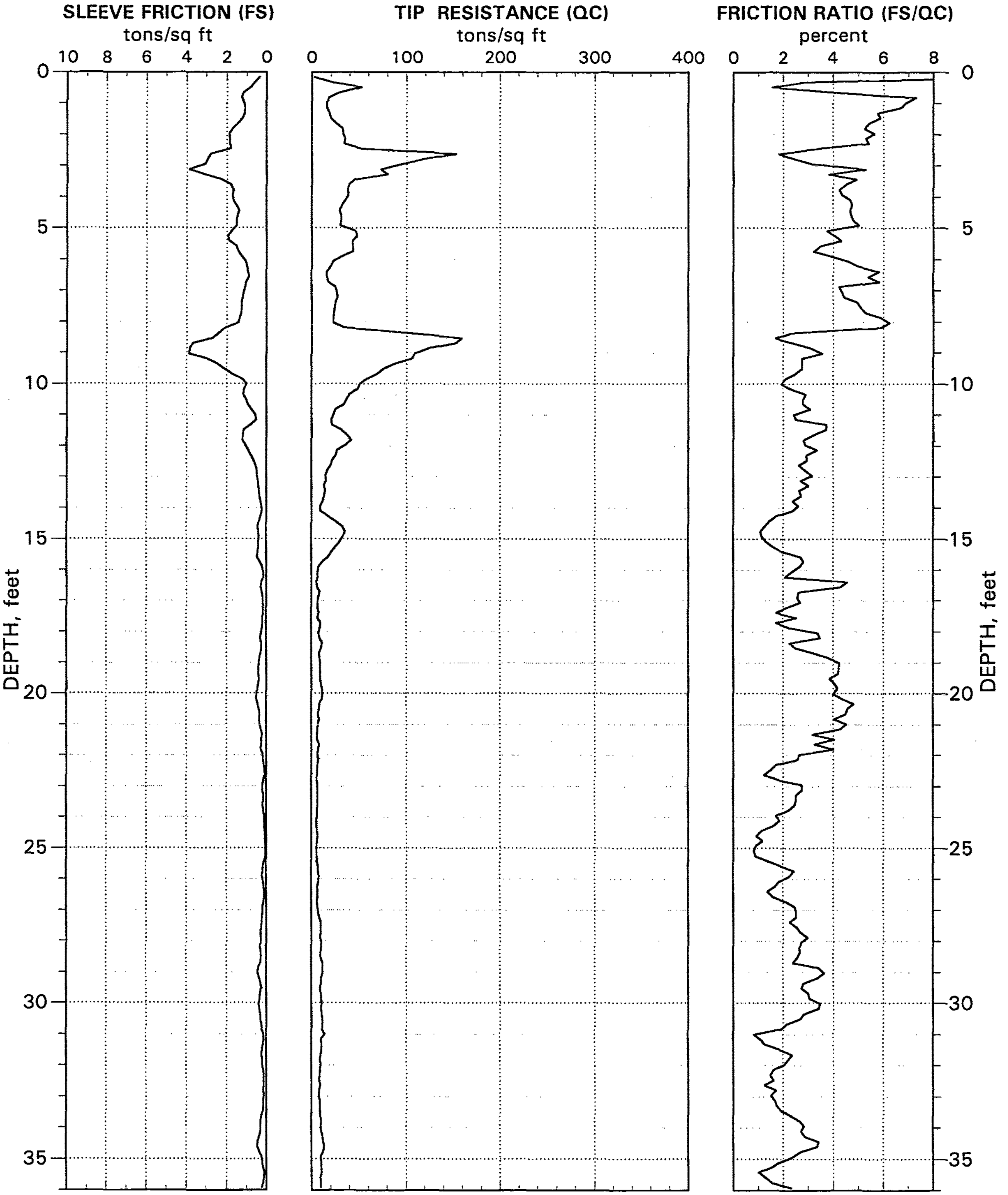
North: 601465
East: 1871373
Date: 4/13/98

Station: 10+110
Offset (m): -49
Surface Elevation: 23 feet (approx.)

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT

Project Number: 95-973017NB.00	CONE PENETRATION TEST SOUNDING NUMBER: WC04	Fig.F-17 Page 1 of 1

URS Greiner Woodward Clyde



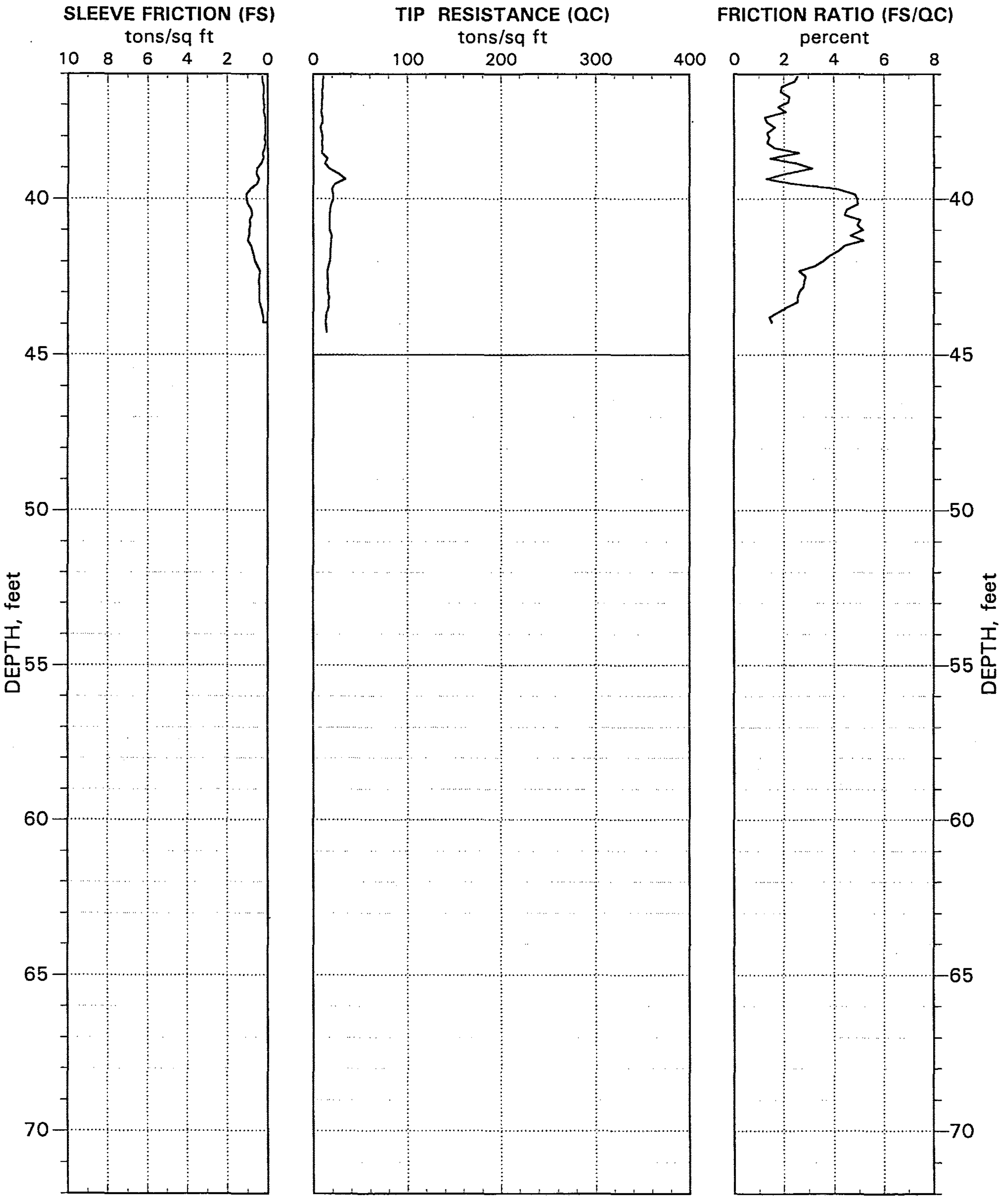
North: 600929
East: 1872153
Date: 4/13/98

Station: 11 + 056
Offset (m): -33
Surface Elevation: 23 feet (approx.)

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT

Project Number: 95-973017NB.00	CONE PENETRATION TEST SOUNDING NUMBER: WC05	Fig.F-18 Page 1 of 2

URS Greiner Woodward Clyde



North: 600929
East: 1872153
Date: 4/13/98

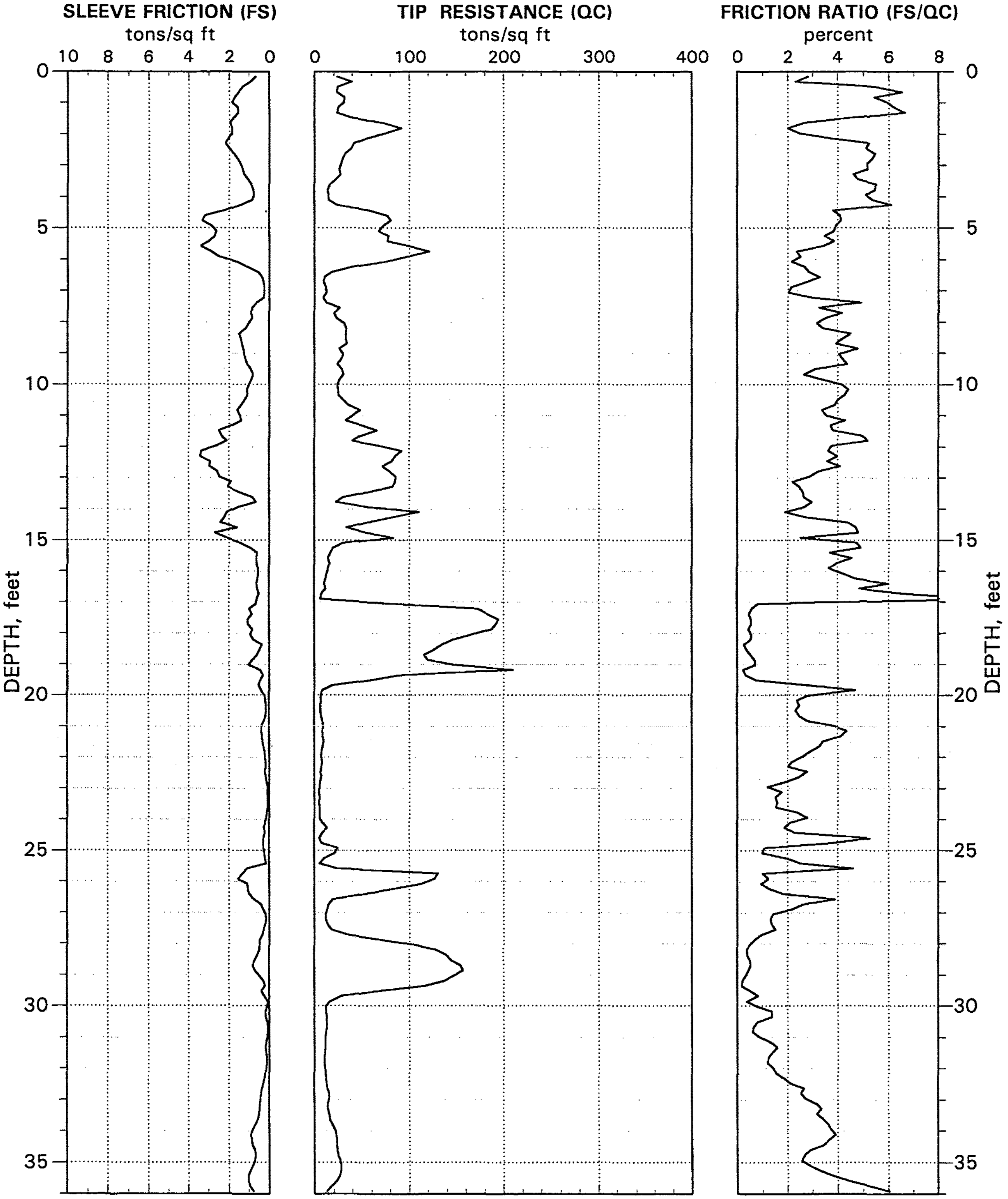
Station: 11+056
Offset (m): -33
Surface Elevation: 23 feet (approx.)

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT

Project Number: 95-973017NB.00	CONE PENETRATION TEST SOUNDING NUMBER: WC05	Fig.F-18 Page 2 of 2

4/20/00 GUADE_CN GUADE

URS Greiner Woodward Clyde



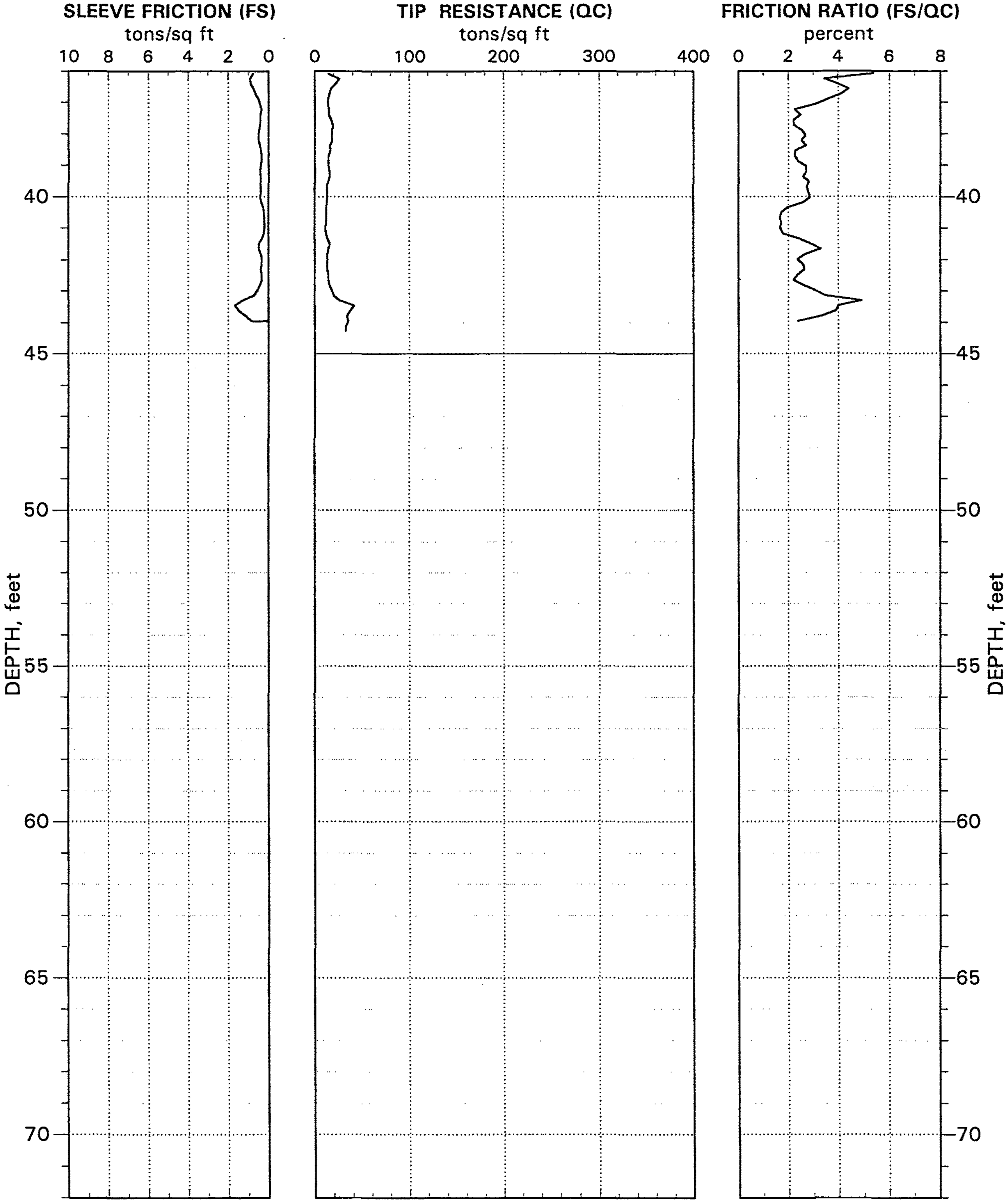
North: 598901
East: 1872621
Date: 4/14/98

Station: 13+510
Offset (m): -36
Surface Elevation: 30 feet (approx.)

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT

Project Number: 95-973017NB.00	CONE PENETRATION TEST SOUNDING NUMBER: WC06	Fig.F-19 Page 1 of 2

URS Greiner Woodward Clyde



North: 598901
East: 1872621
Date: 4/14/98

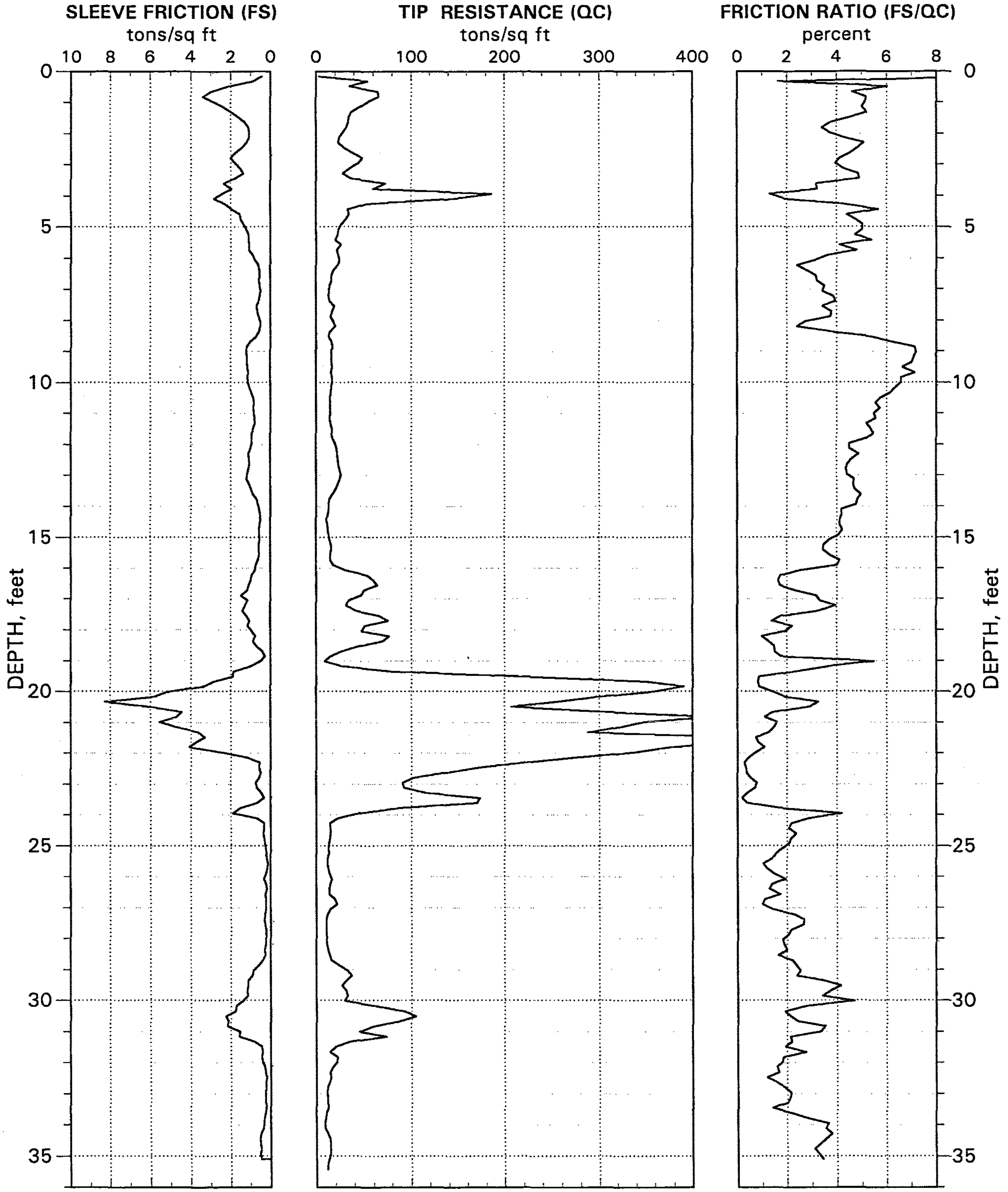
Station: 13+510
Offset (m): -36
Surface Elevation: 30 feet (approx.)

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT

Project Number: 95-973017NB.00	CONE PENETRATION TEST SOUNDING NUMBER: WC06	Fig.F-19 Page 2 of 2

4/20/00 GUADE_CN GUADE

URS Greiner Woodward Clyde



North: 598644
East: 1872629
Date: 4/14/98

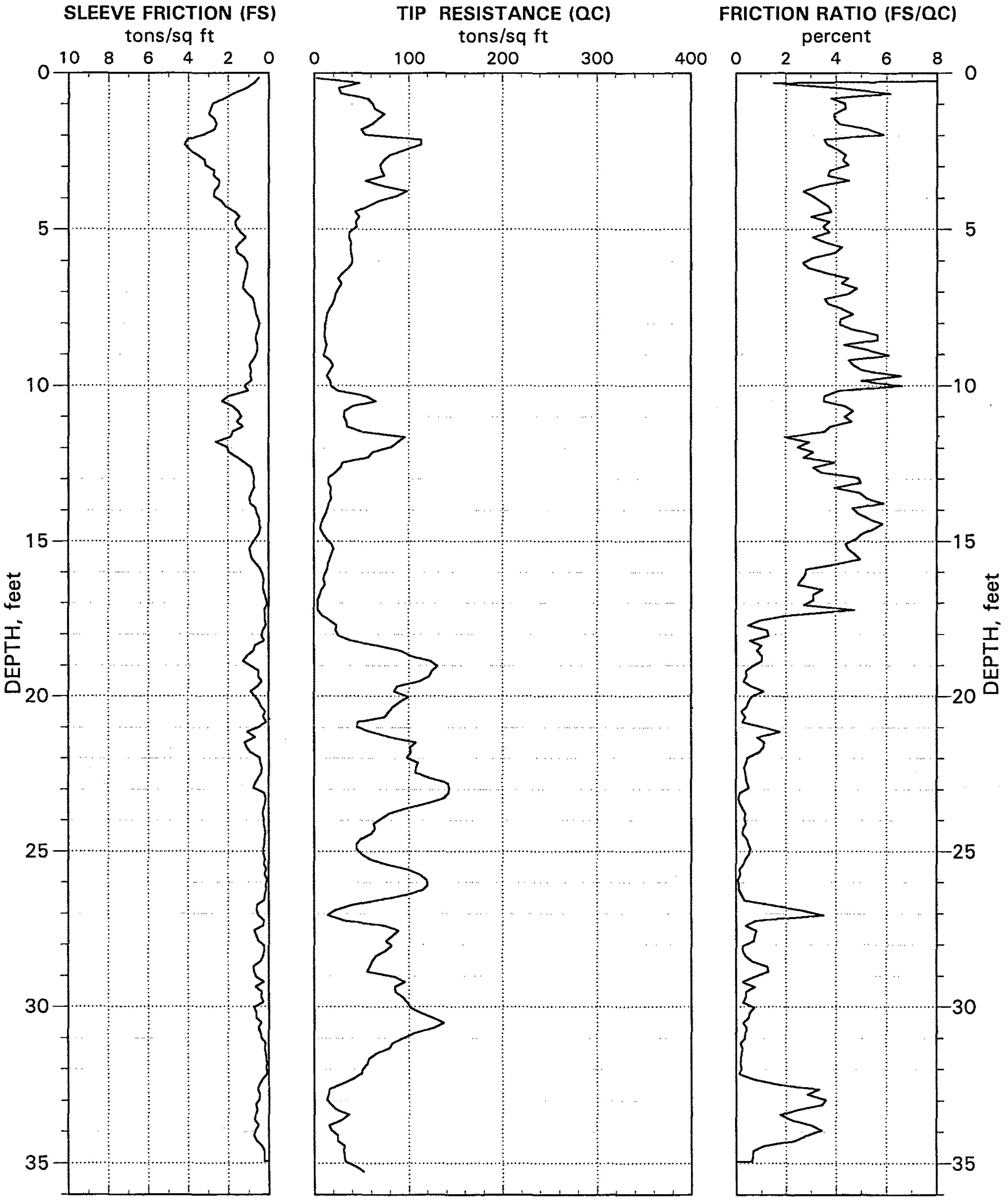
Station: 13+748
Offset (m): -38
Surface Elevation: 32 feet (approx.)

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT

Project Number: 95-973017NB.00	CONE PENETRATION TEST SOUNDING NUMBER: WC07	Fig.F-20 Page 1 of 1

4/20/00 GUADE_CN GUADE

URS Greiner Woodward Clyde



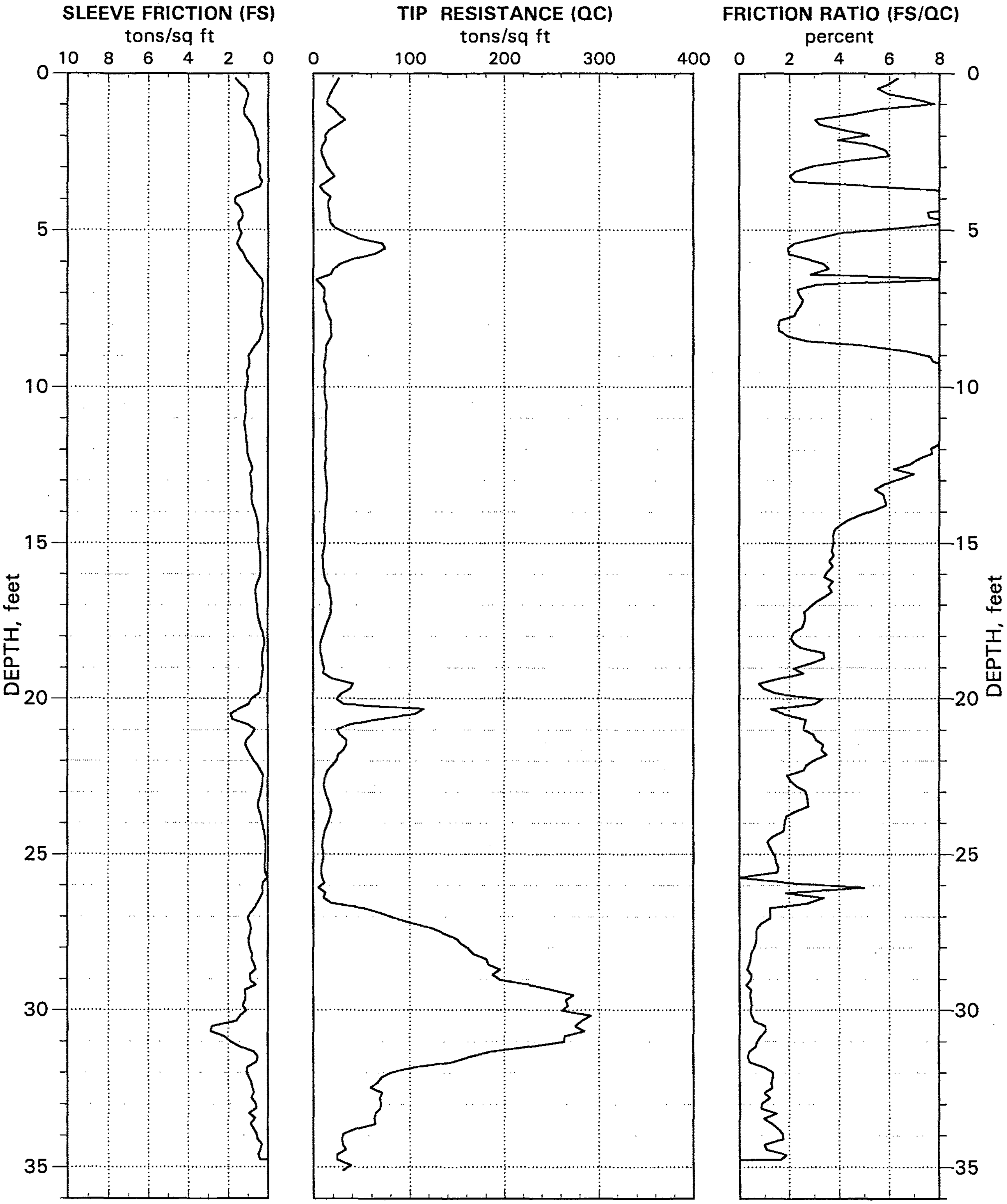
North: 598443
East: 1872737
Date: 4/14/98

Station: 13+956
Offset (m): -40
Surface Elevation: 33 feet (approx.)

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT

Project Number: 95-973017NB.00	CONE PENETRATION TEST SOUNDING NUMBER: WC08	Fig.F-21 Page 1 of 1

URS Greiner Woodward Clyde



North: 597682
East: 1873351
Date: 4/16/98

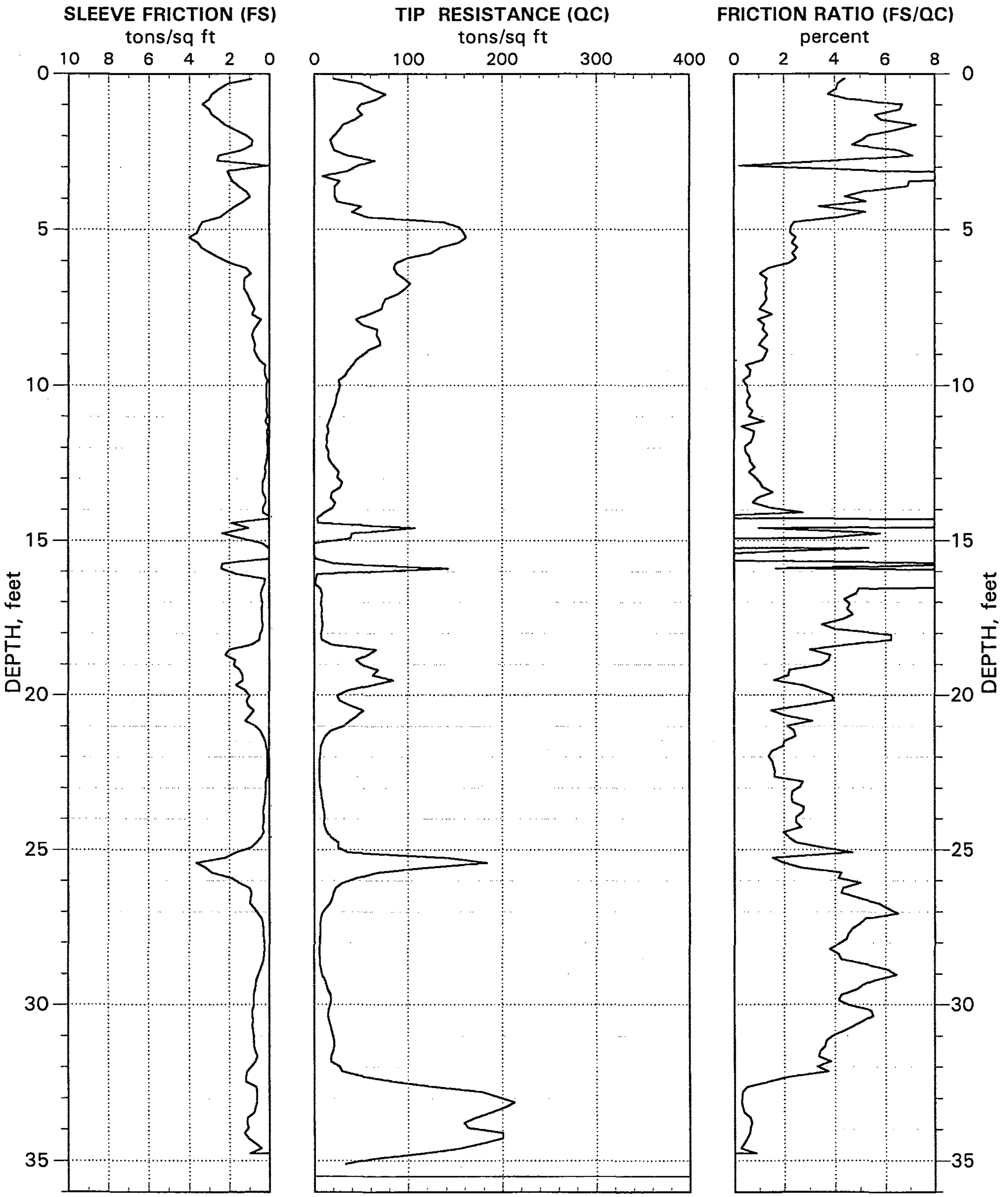
Station: 15+029
Offset (m): -47
Surface Elevation: 44 feet (approx.)

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT

Project Number: 95-973017NB.00	CONE PENETRATION TEST SOUNDING NUMBER: WC09	Fig.F-22 Page 1 of 1

4/20/00 GUADE_CN GUADE

URS Greiner Woodward Clyde



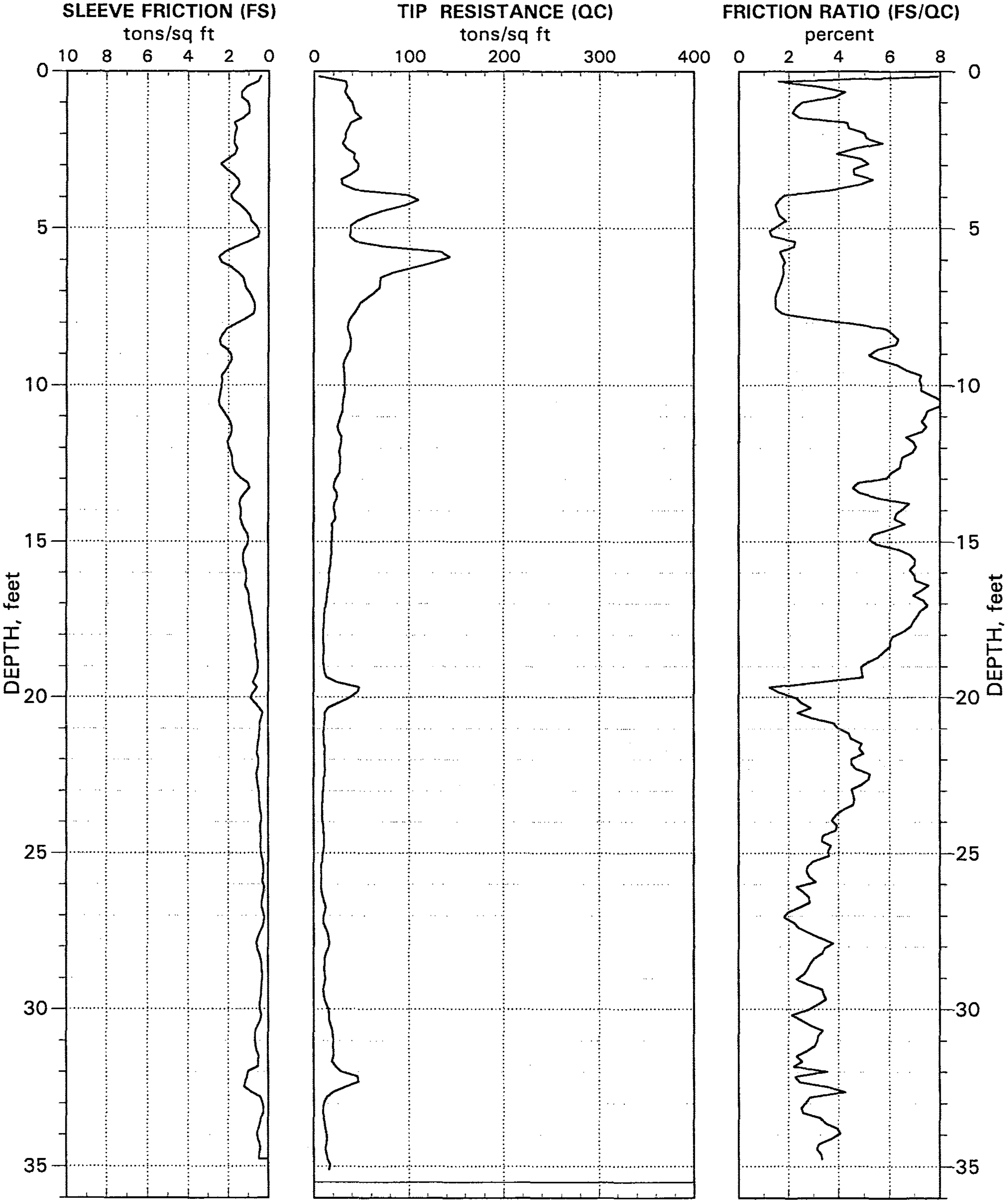
North: 597259
East: 1873706
Date: 4/16/98

Station: 15+601
Offset (m): -37
Surface Elevation: 43 feet (approx.)

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT

Project Number: 95-973017NB.00	CONE PENETRATION TEST SOUNDING NUMBER: WC10	Fig.F-23 Page 1 of 1

URS Greiner Woodward Clyde



North: 597084
East: 1873958
Date: 4/16/98

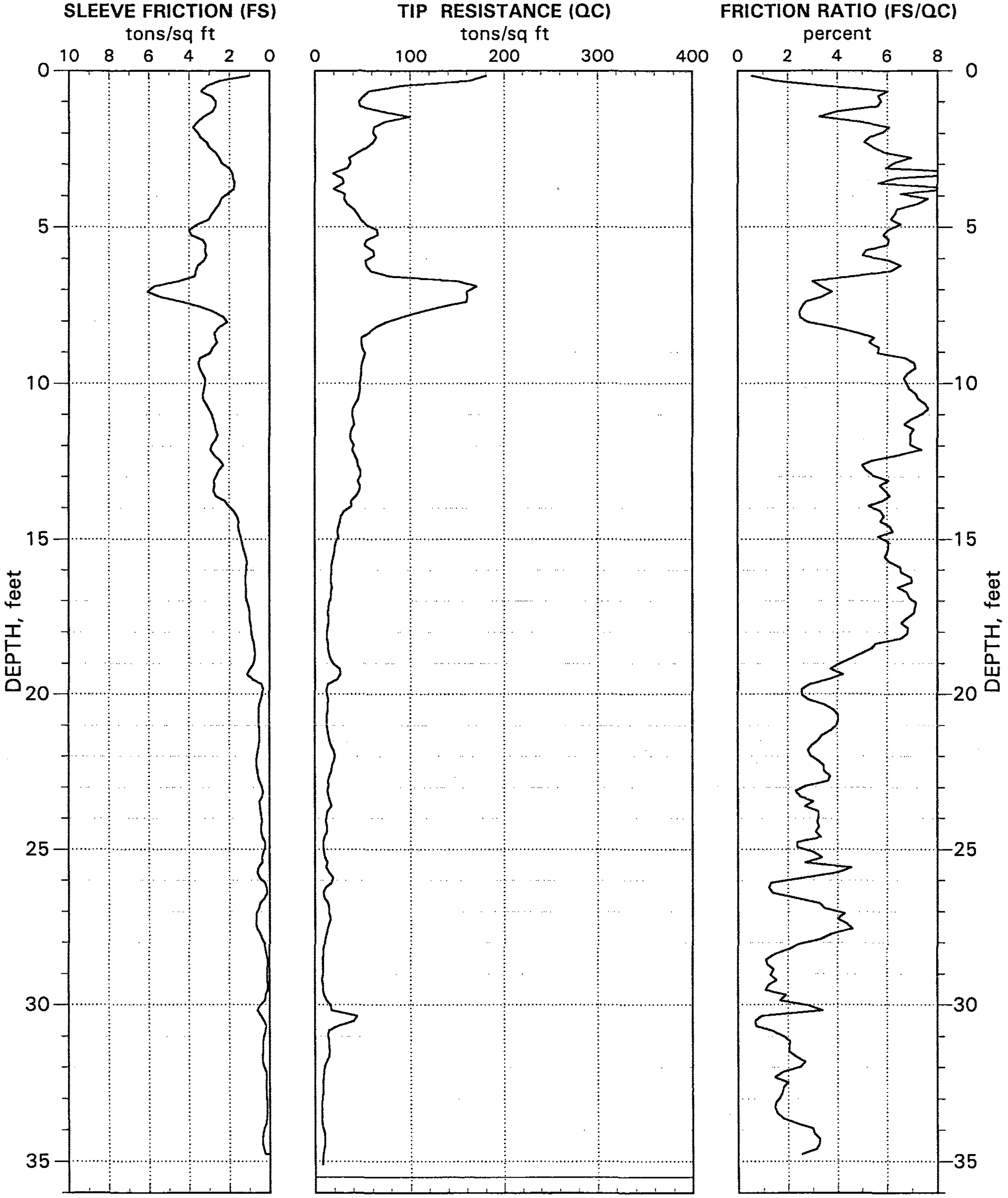
Station: 15+895
Offset (m): -33
Surface Elevation: 48 feet (approx.)

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT

Project Number: 95-973017NB.00	CONE PENETRATION TEST SOUNDING NUMBER: WC11	Fig.F-24 Page 1 of 1

4/20/00 GUADE_CN GUADE

URS Greiner Woodward Clyde

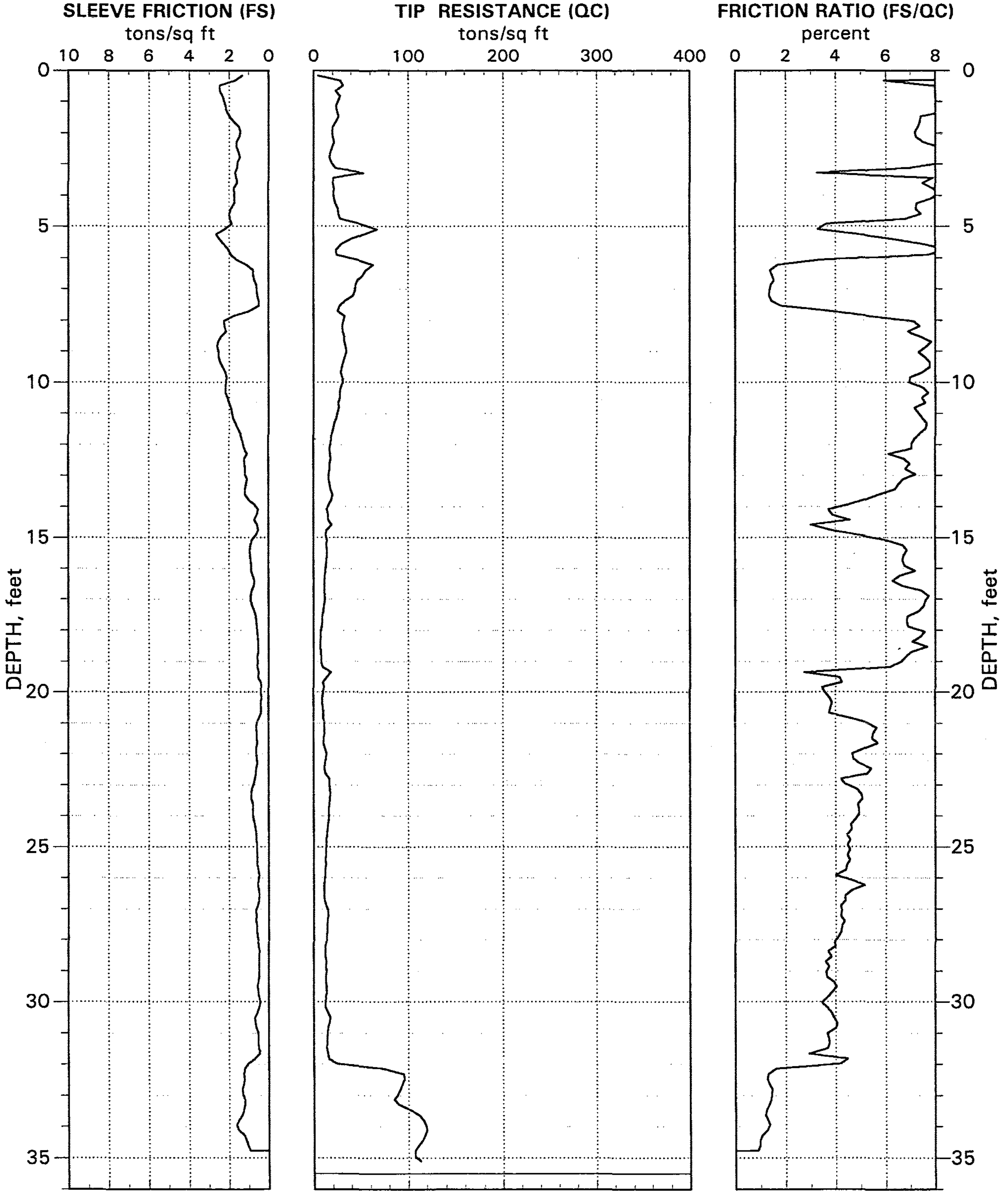


North: 596908
East: 1874163
Date: 4/16/98

Station: 16+189
Offset (m): -36
Surface Elevation: 49 feet (approx.)

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT

Project Number: 95-973017NB.00	CONE PENETRATION TEST SOUNDING NUMBER: WC12	Fig.F-25 Page 1 of 1



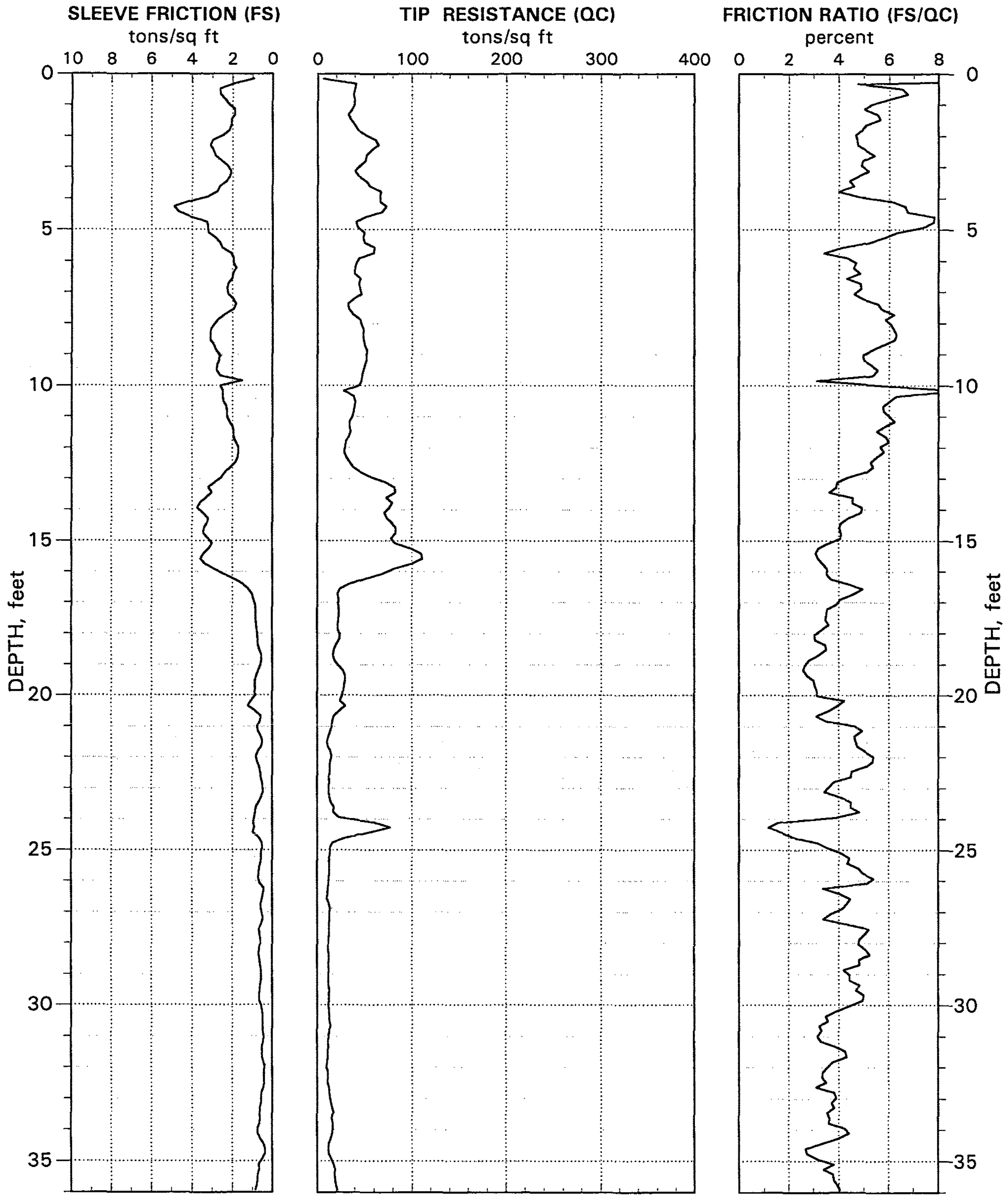
North: 596642
East: 1874317
Date: 4/16/98

Station: 16+498
Offset (m): -39
Surface Elevation: 51 feet (approx.)

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT

Project Number: 95-973017NB.00	CONE PENETRATION TEST SOUNDING NUMBER: WC13	Fig.F-26 Page 1 of 1

URS Greiner Woodward Clyde



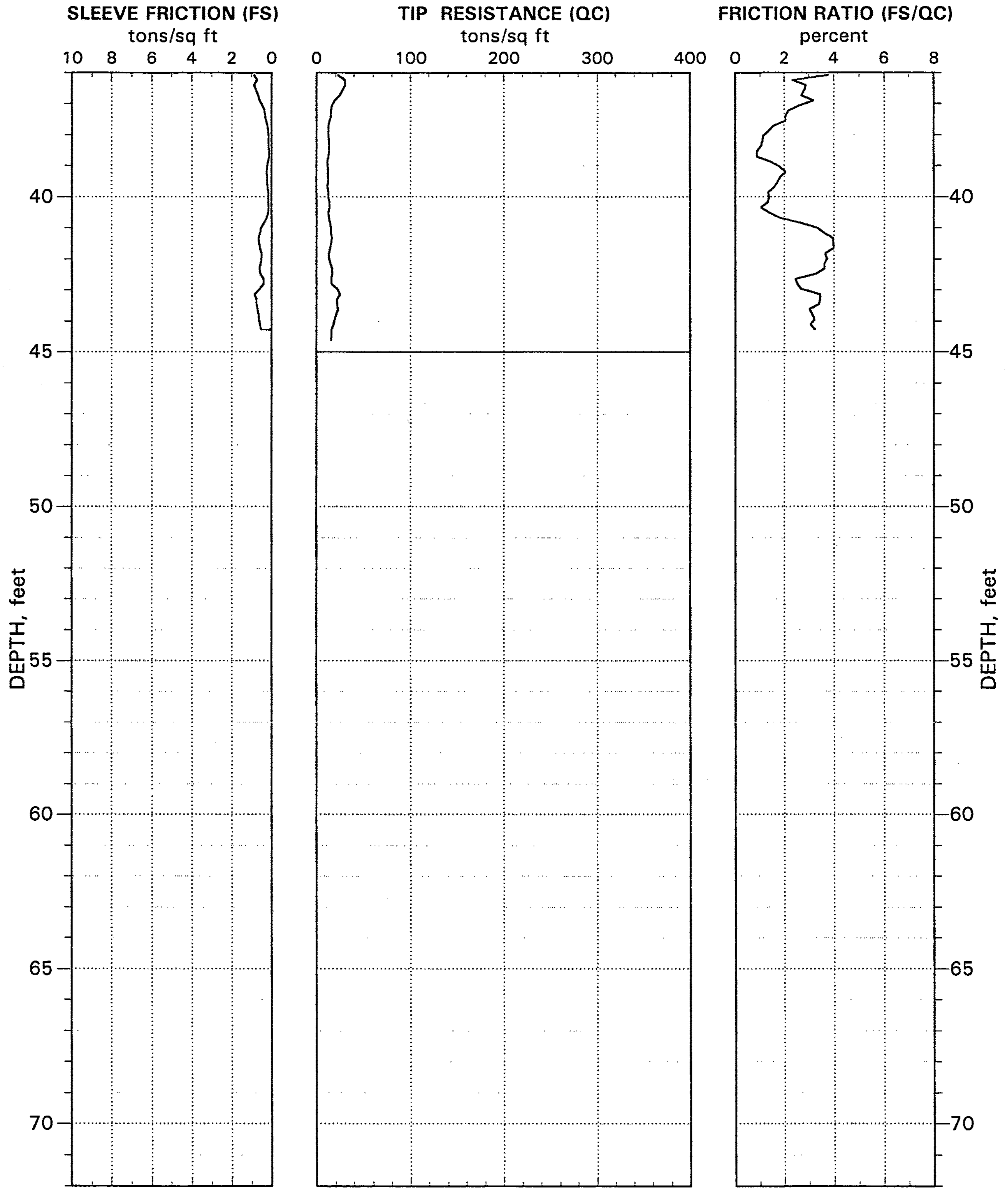
North: 596222
East: 1874576
Date: 4/16/98

Station: 16+992
Offset (m): -27
Surface Elevation: 57 feet (approx.)

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT

Project Number: 95-973017NB.00	**CONE PENETRATION TEST** **SOUNDING NUMBER: WC14**	**Fig.F-27** **Page 1 of 2**

URS Greiner Woodward Clyde



North: 596222
East: 1874576
Date: 4/16/98

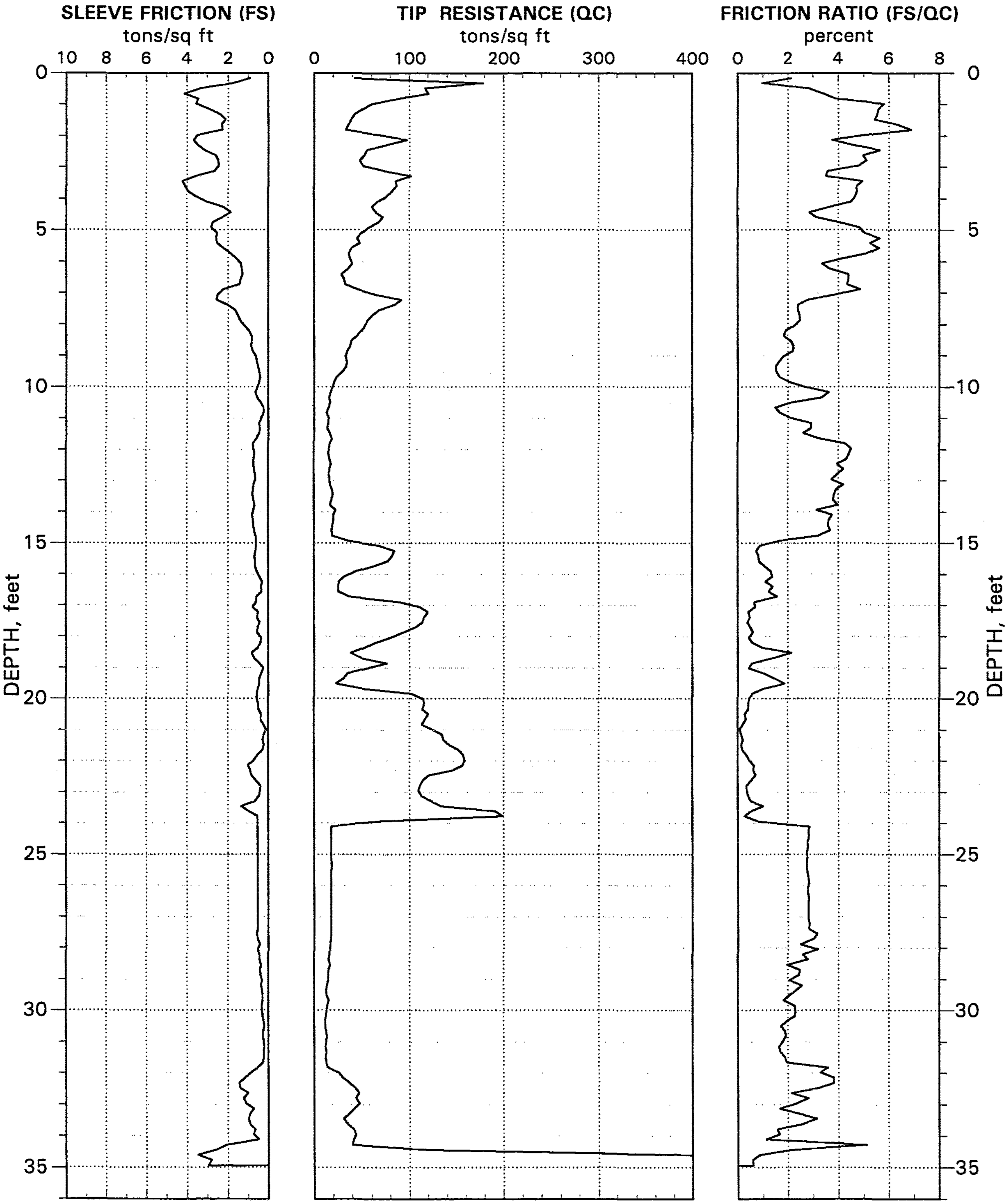
Station: 16+992
Offset (m): -27
Surface Elevation: 57 feet (approx.)

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT

Project Number: 95-973017NB.00	**CONE PENETRATION TEST** **SOUNDING NUMBER: WC14**	**Fig.F-27** **Page 2 of 2**

4/20/00 GUADE_CN GUADE

URS Greiner Woodward Clyde



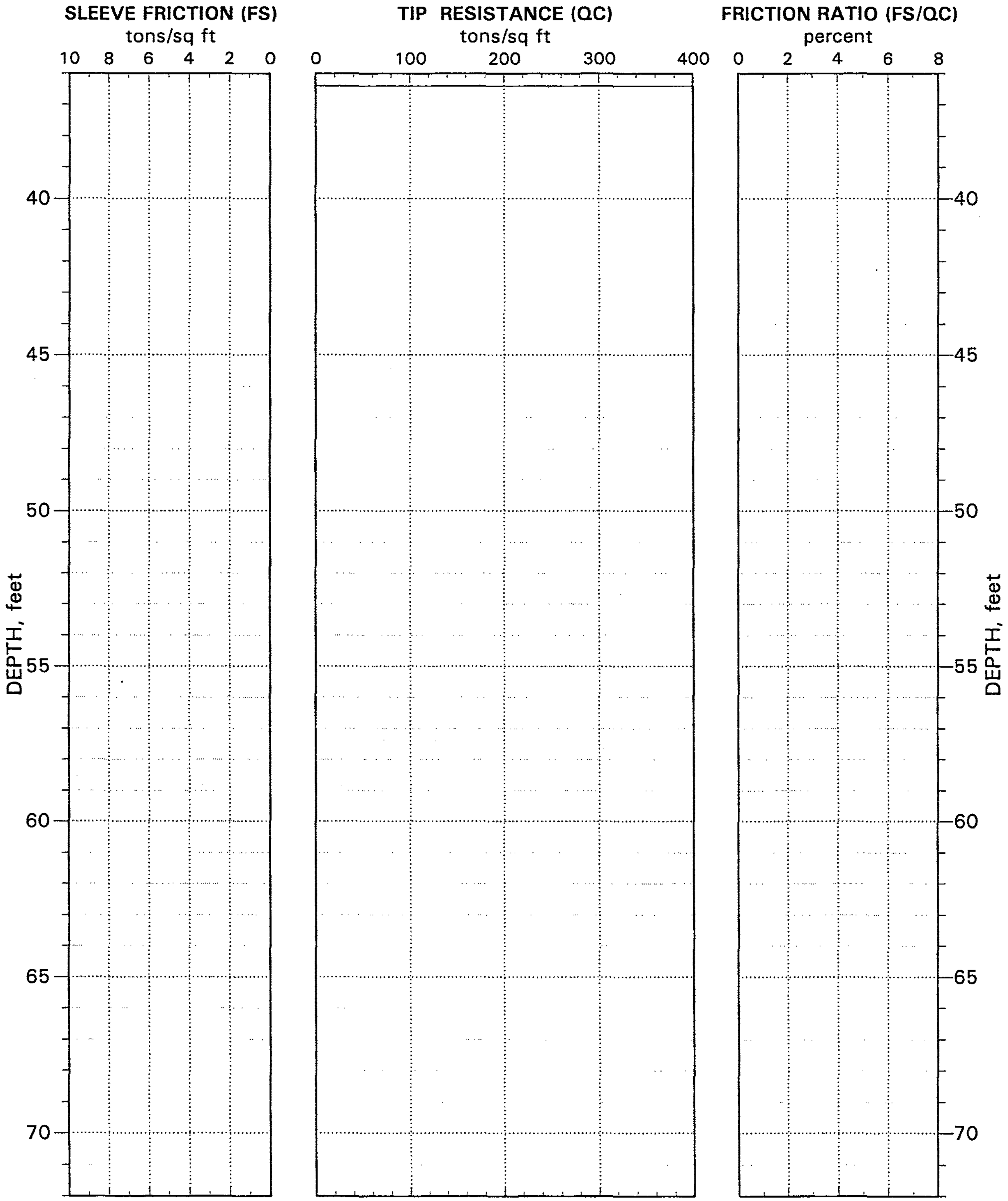
North: 595717
East: 1874874
Date: 4/16/98

Station: 17+578
Offset (m): -25
Surface Elevation: 60 feet (approx.)

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT

Project Number: 95-973017NB.00	CONE PENETRATION TEST SOUNDING NUMBER: WC15	Fig.F-28 Page 1 of 2

URS Greiner Woodward Clyde

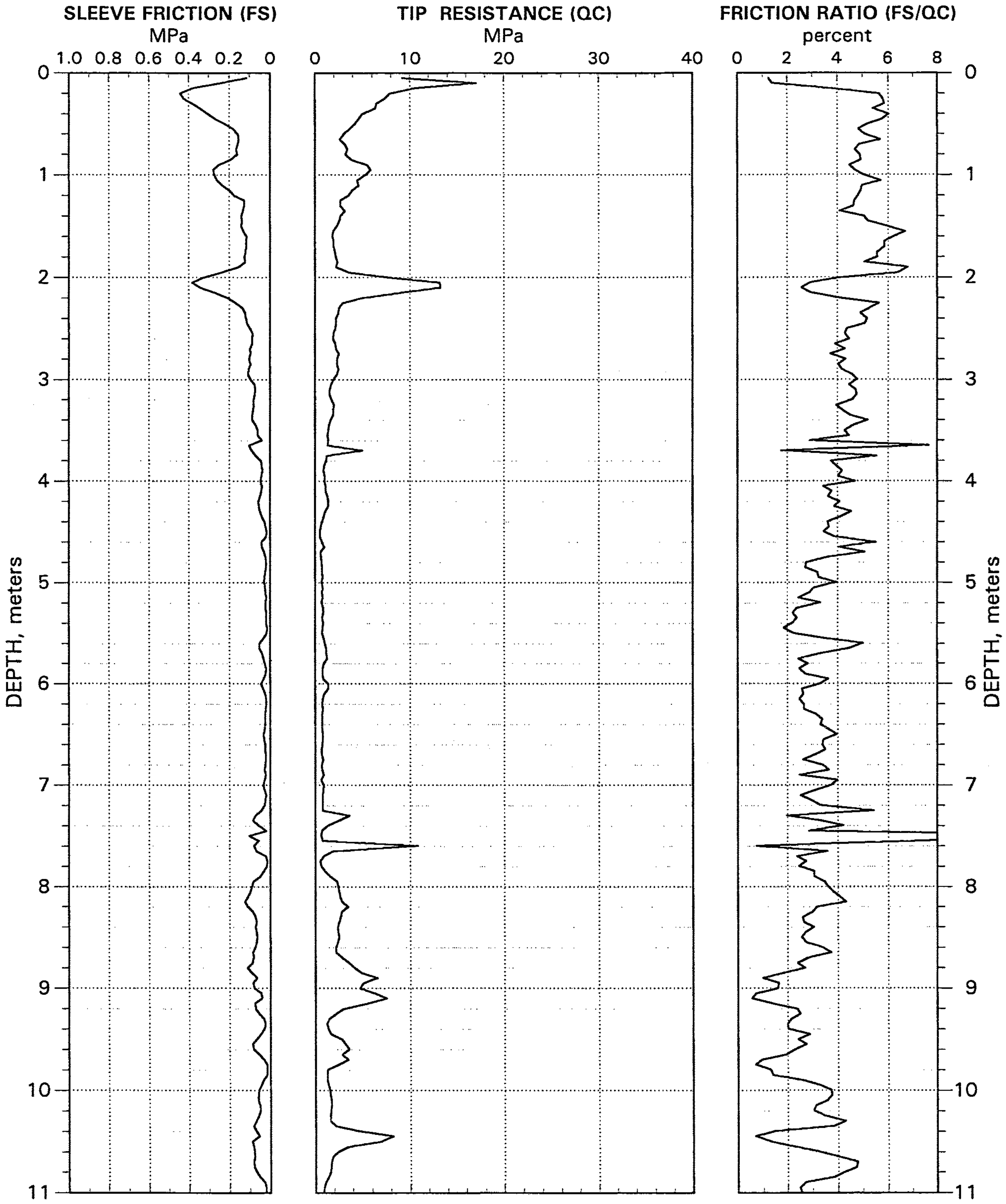


North: 595717
East: 1874874
Date: 4/16/98

Station: 17+578
Offset (m): -25
Surface Elevation: 60 feet (approx.)

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT

Project Number: 95-973017NB.00	CONE PENETRATION TEST SOUNDING NUMBER: WC15	Fig.F-28 Page 2 of 2



North: 603491
East: 1869444
Date: 4/15/98

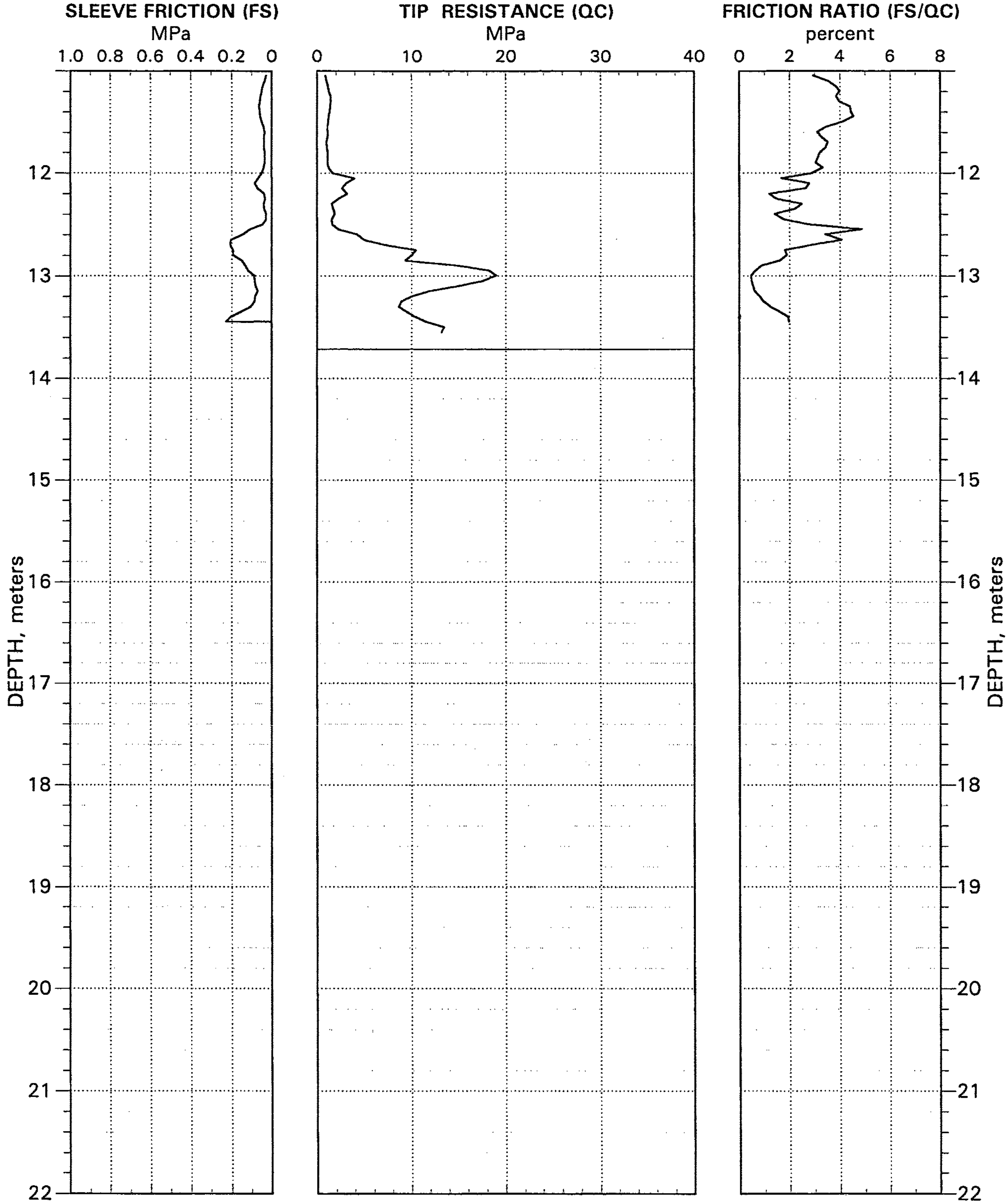
Station: 7+191
Offset (m): 70
Surface Elevation: 4.3 meters (approx.)

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT

Project Number: 95-973017NB.00	CONE PENETRATION TEST SOUNDING NUMBER: EC01	Fig.F-29 Page 1 of 2

4/20/00 GUADM_CN GUADM

URS Greiner Woodward Clyde



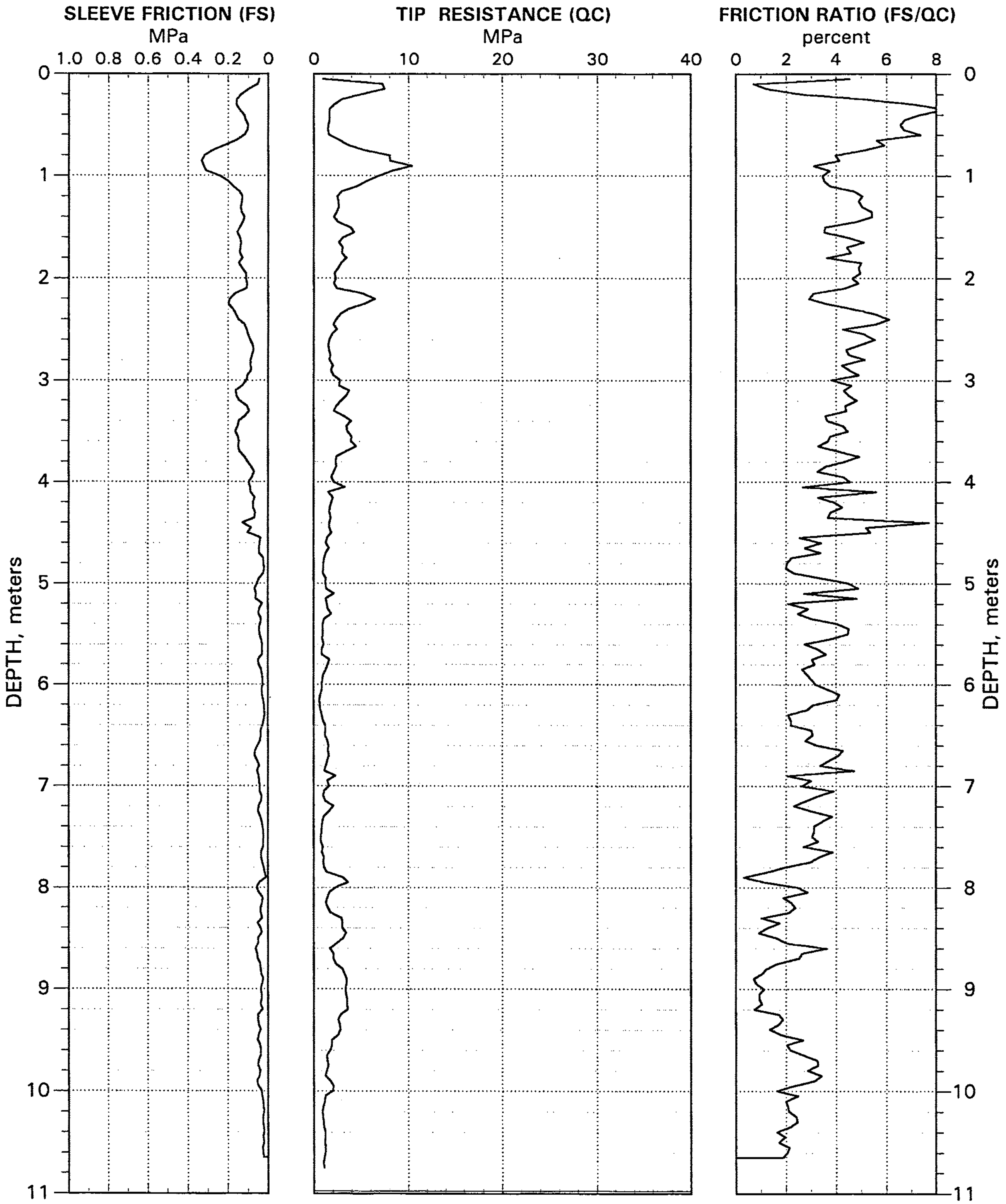
North: 603491
East: 1869444
Date: 4/15/98

Station: 7+191
Offset (m): 70
Surface Elevation: 4.3 meters (approx.)

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT

Project Number: 95-973017NB.00	CONE PENETRATION TEST SOUNDING NUMBER: EC01	Fig.F-29 Page 2 of 2

URS Greiner Woodward Clyde



North: 603088
East: 1870088
Date: 4/15/98

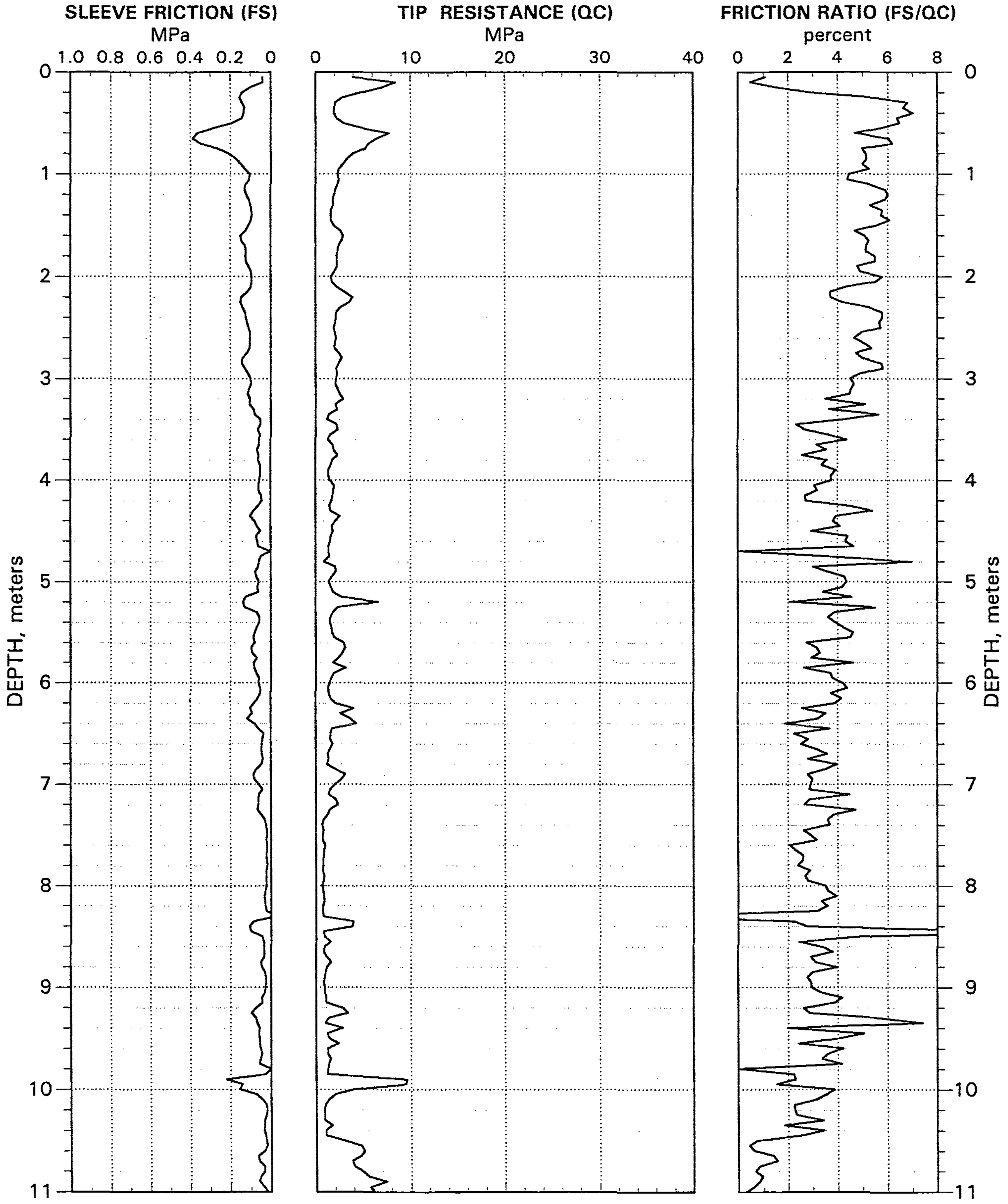
Station: 7 + 945
Offset (m): 42
Surface Elevation: 5.2 meters (approx.)

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT

Project Number: 95-973017NB.00	CONE PENETRATION TEST SOUNDING NUMBER: EC02	Fig.F-30 Page 1 of 1

4/20/00 GUADM_CN GUADM

URS Greiner Woodward Clyde



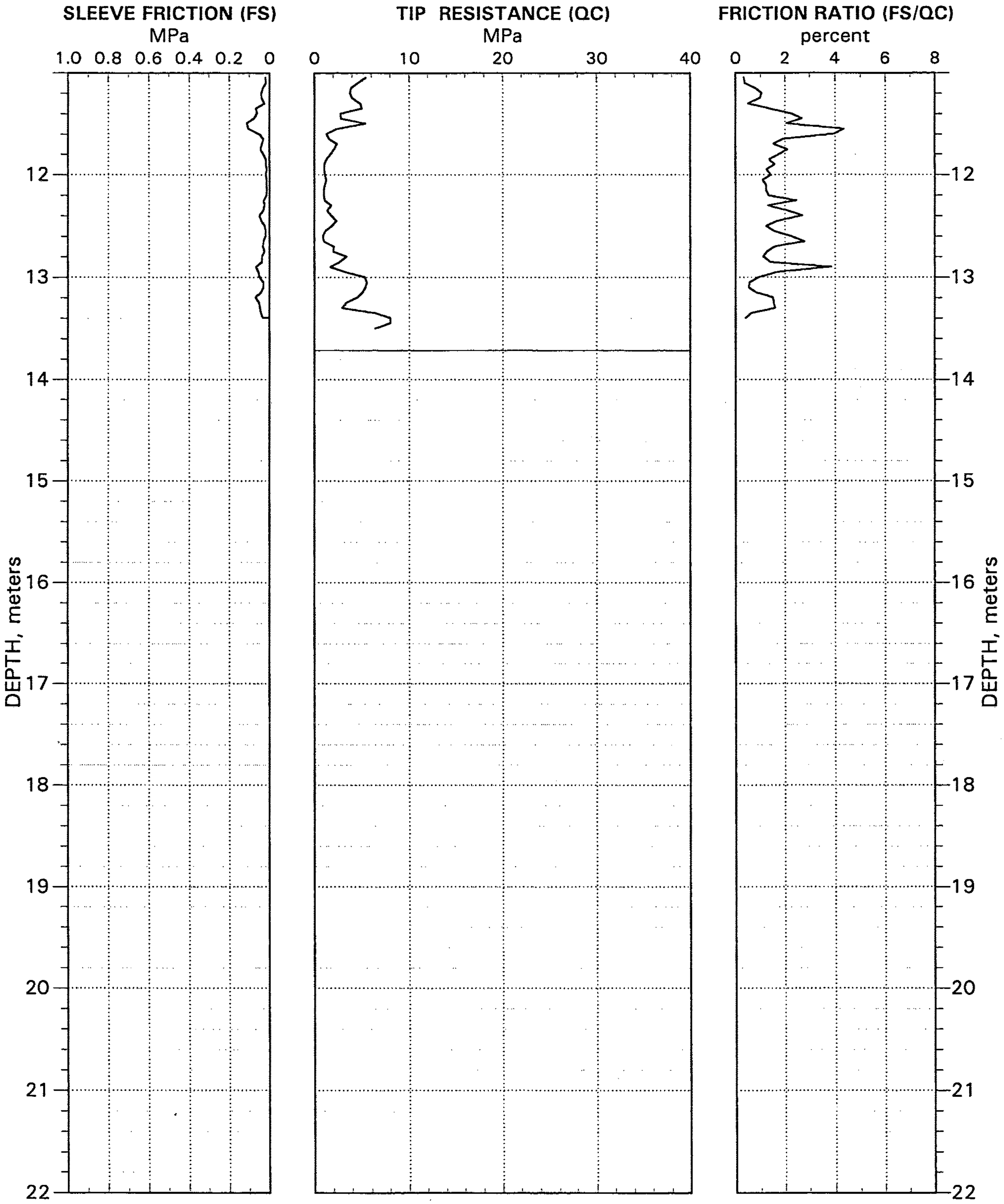
North: 603072
East: 1870092
Date: 4/15/98

Station: 7+960
Offset (m): 42
Surface Elevation: 5.2 meters (approx.)

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT

Project Number: 95-973017NB.00	CONE PENETRATION TEST SOUNDING NUMBER: EC03	Fig.F-31 Page 1 of 2

URS Greiner Woodward Clyde



North: 603072
East: 1870092
Date: 4/15/98

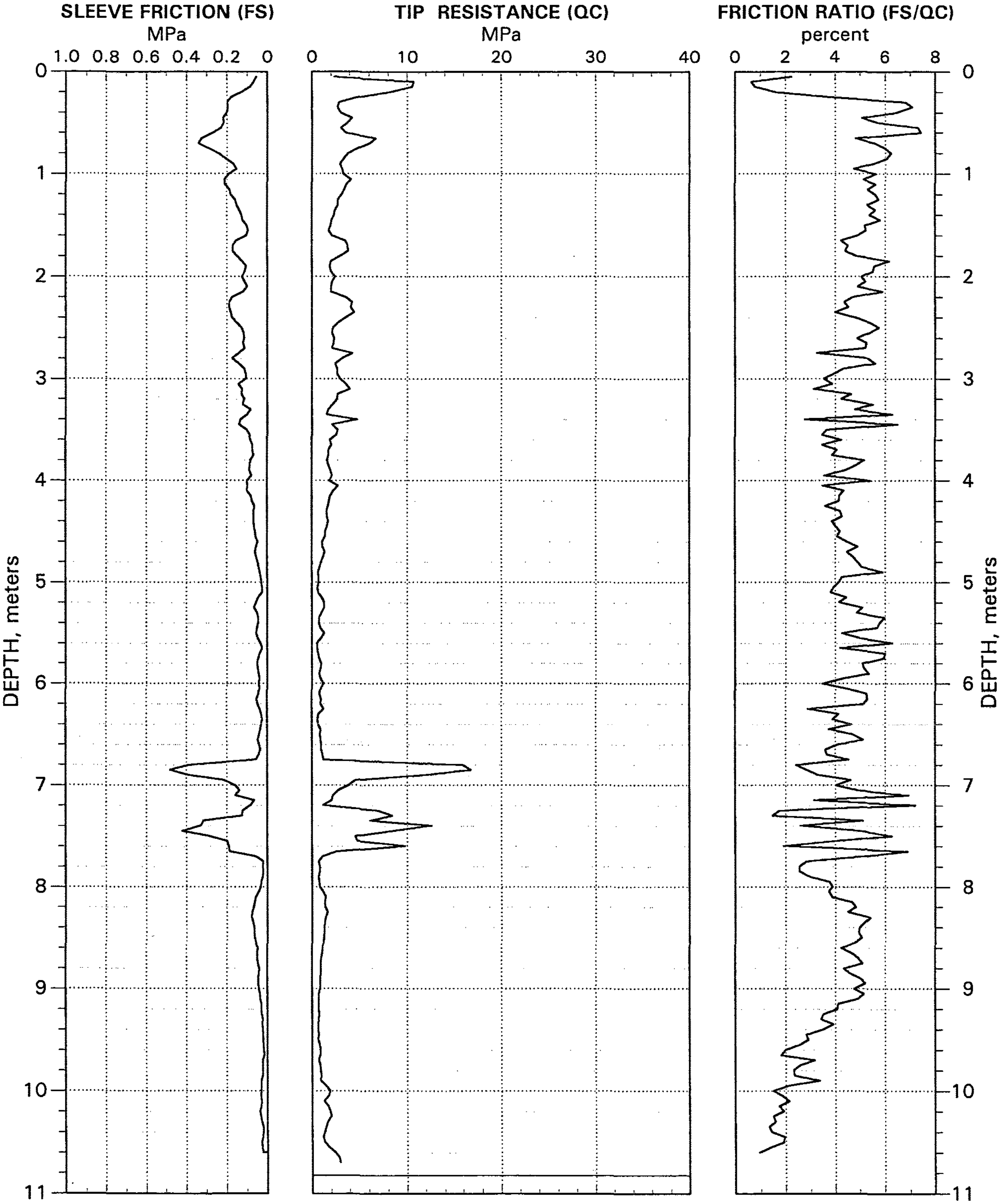
Station: 7+960
Offset (m): 42
Surface Elevation: 5.2 meters (approx.)

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT

Project Number: 95-973017NB.00	CONE PENETRATION TEST SOUNDING NUMBER: EC03	Fig.F-31 Page 2 of 2

4/20/00 GUADM_CN GUADM

URS Greiner Woodward Clyde



North: 603056
East: 1870099
Date: 4/15/98

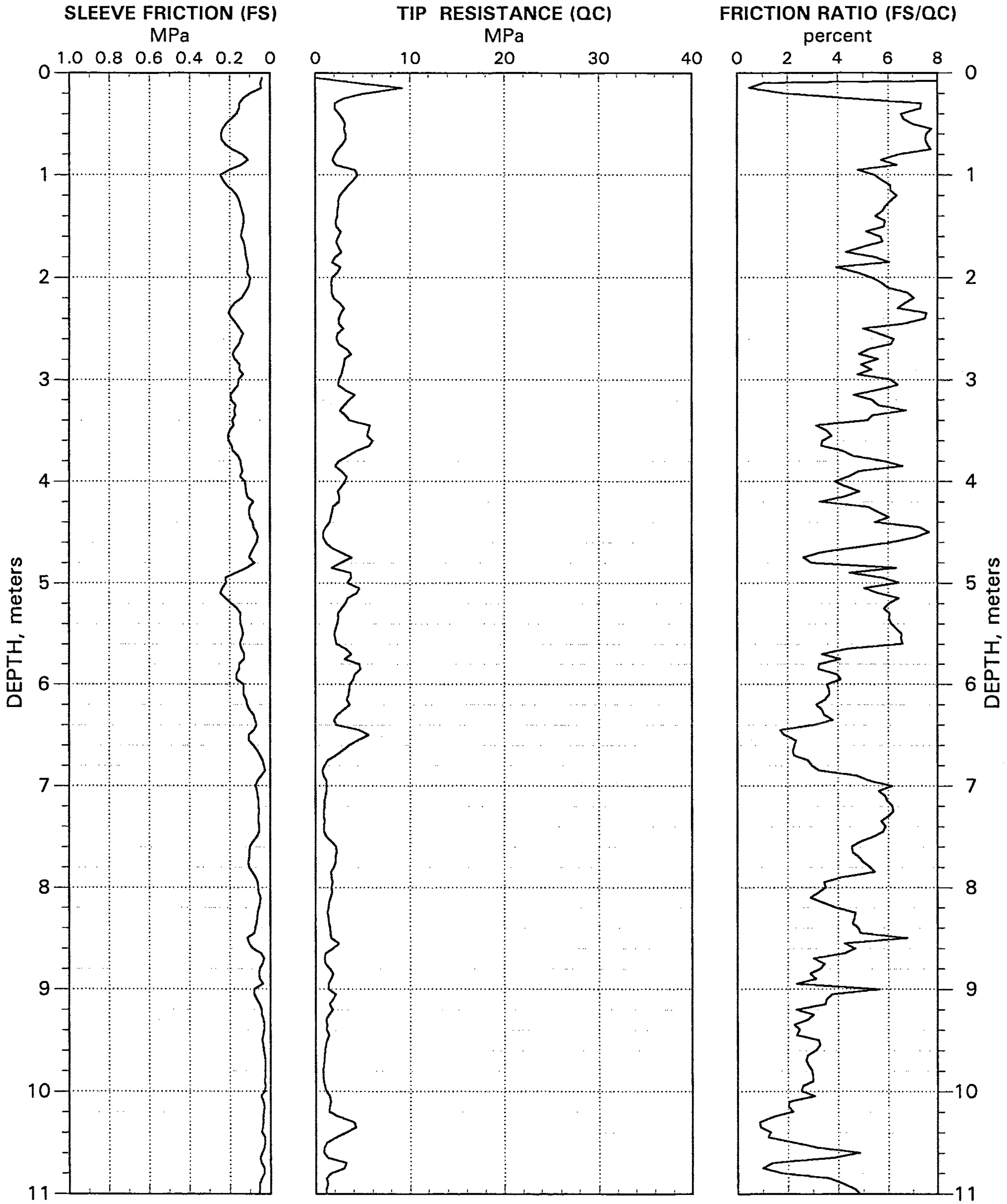
Station: 7+976
Offset (m): 45
Surface Elevation: 5.2 meters (approx.)

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT

Project Number: 95-973017NB.00	CONE PENETRATION TEST SOUNDING NUMBER: EC04	Fig.F-32 Page 1 of 1

4/20/00 GUADM_CN GUADM

URS Greiner Woodward Clyde

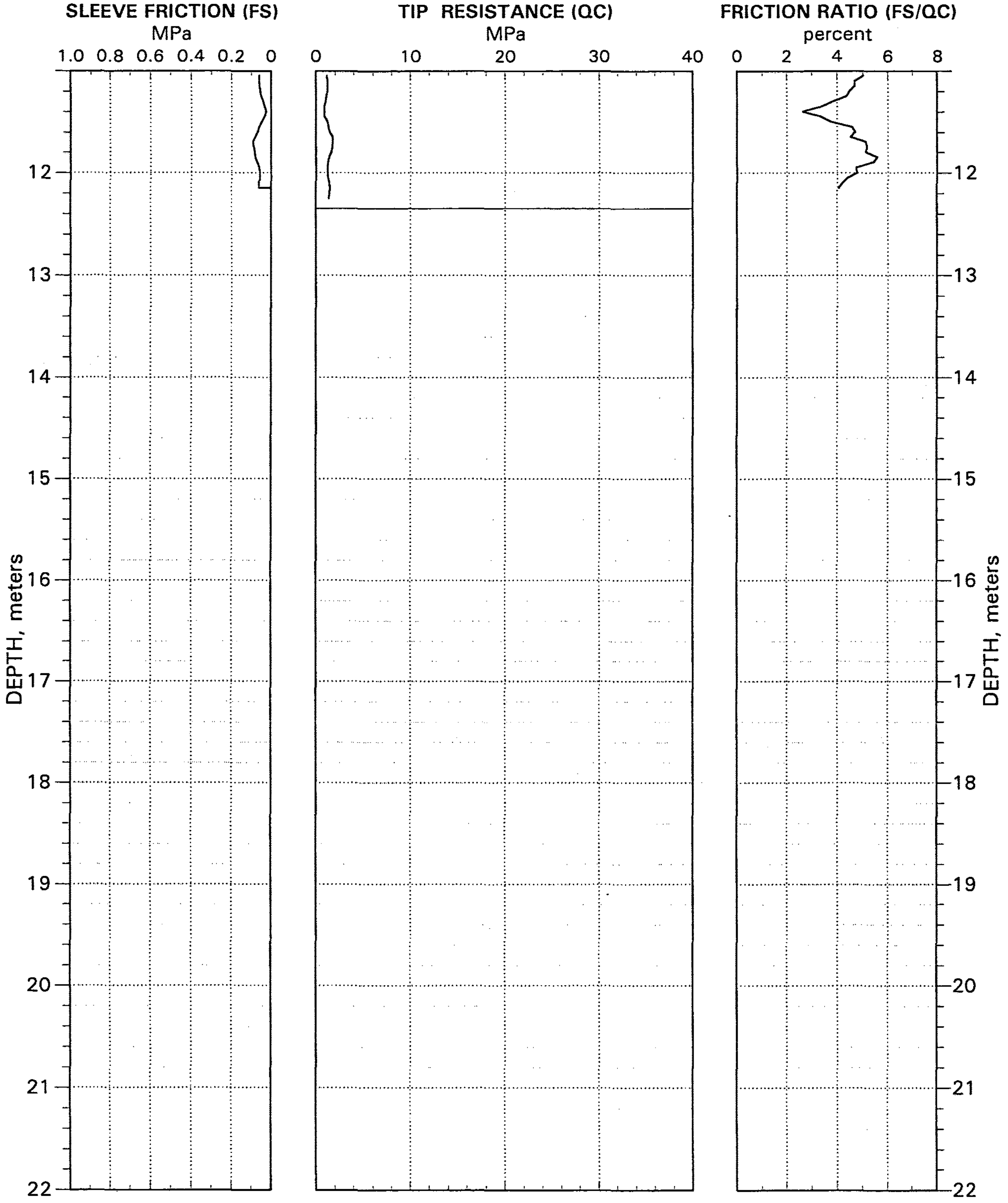


North: 602395
East: 1870479
Date: 4/13/98

Station: 8+763
Offset (m): 44
Surface Elevation: 6.1 meters (approx.)

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT

Project Number: 95-973017NB.00	CONE PENETRATION TEST SOUNDING NUMBER: EC05	Fig.F-33 Page 1 of 2



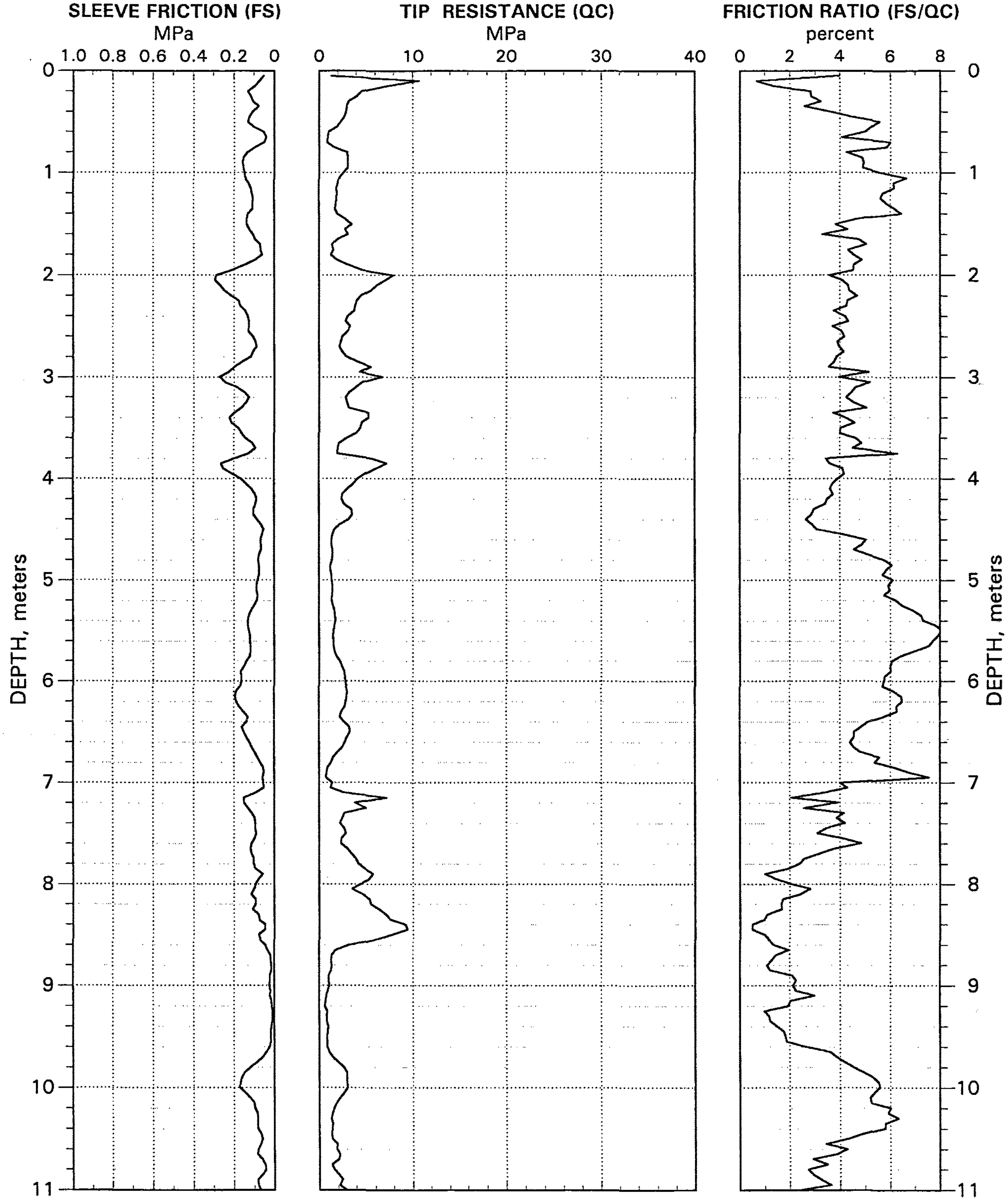
North: 602395
East: 1870479
Date: 4/13/98

Station: 8+763
Offset (m): 44
Surface Elevation: 6.1 meters (approx.)

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT

Project Number: 95-973017NB.00	CONE PENETRATION TEST SOUNDING NUMBER: EC05	Fig.F-33 Page 2 of 2

URS Greiner Woodward Clyde



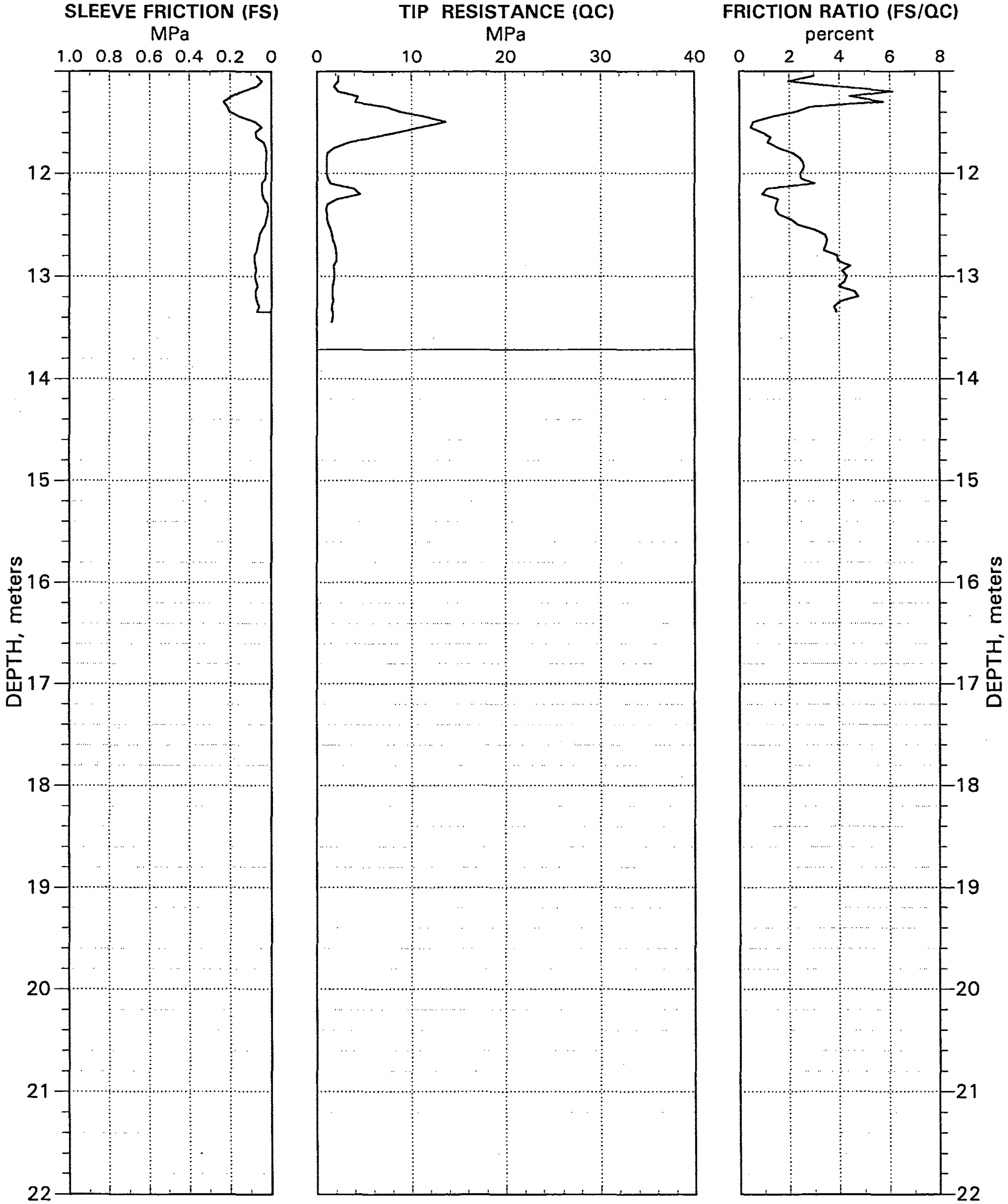
North: 601347
East: 1871574
Date: 4/13/98

Station: 10+329
Offset (m): 45
Surface Elevation: 6.7 meters (approx.)

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT

Project Number: 95-973017NB.00	CONE PENETRATION TEST SOUNDING NUMBER: EC06	Fig.F-34 Page 1 of 2

URS Greiner Woodward Clyde



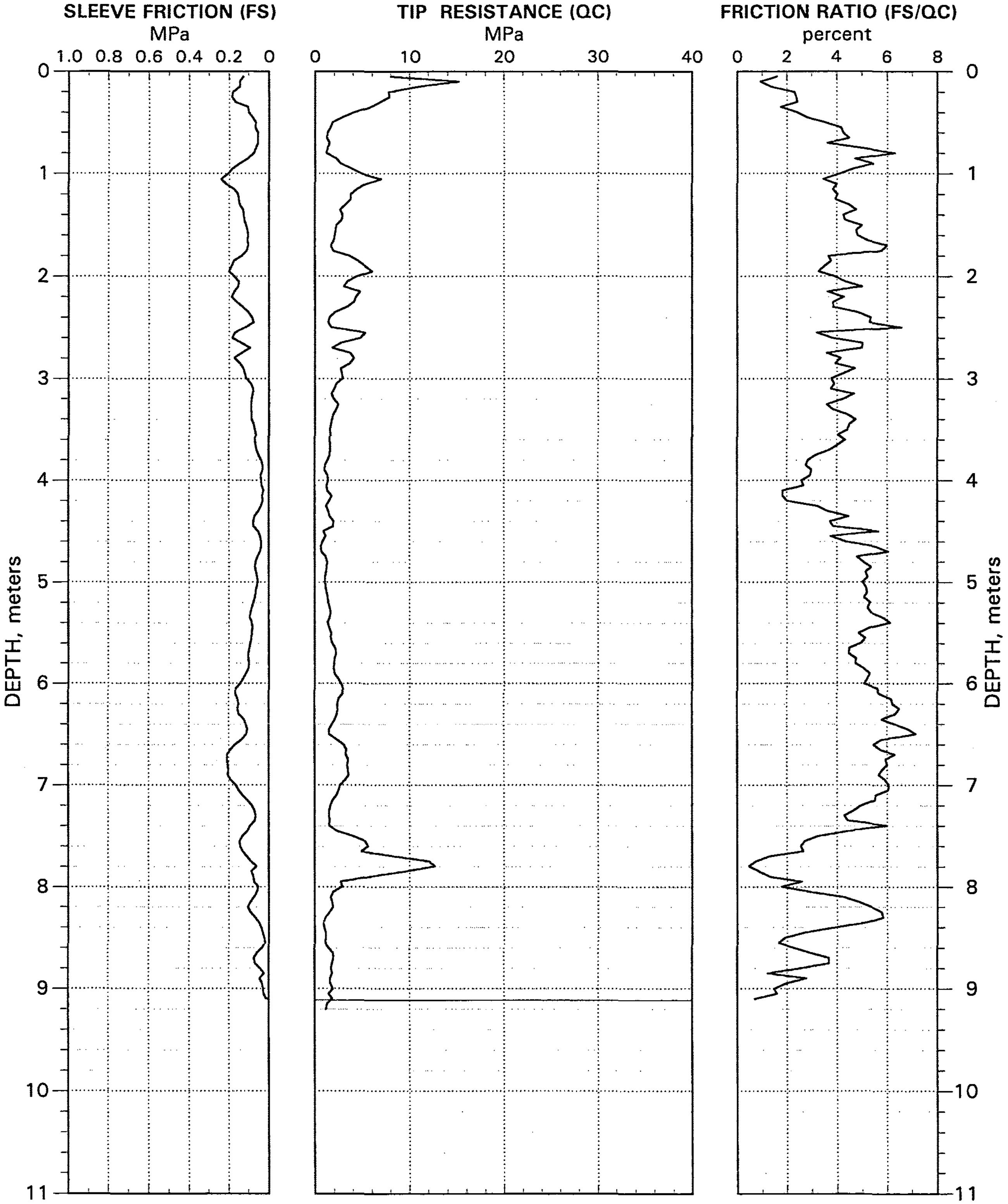
North: 601347
East: 1871574
Date: 4/13/98

Station: 10+329
Offset (m): 45
Surface Elevation: 6.7 meters (approx.)

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT

Project Number: 95-973017NB.00	CONE PENETRATION TEST SOUNDING NUMBER: EC06	Fig.F-34 Page 2 of 2

URS Greiner Woodward Clyde



North: 600687
East: 1872383
Date: 4/13/98

Station: 11+496
Offset (m): 43
Surface Elevation: 7.6 meters (approx.)

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT

Project Number: 95-973017NB.00

CONE PENETRATION TEST
SOUNDING NUMBER: EC07

Fig.F-35

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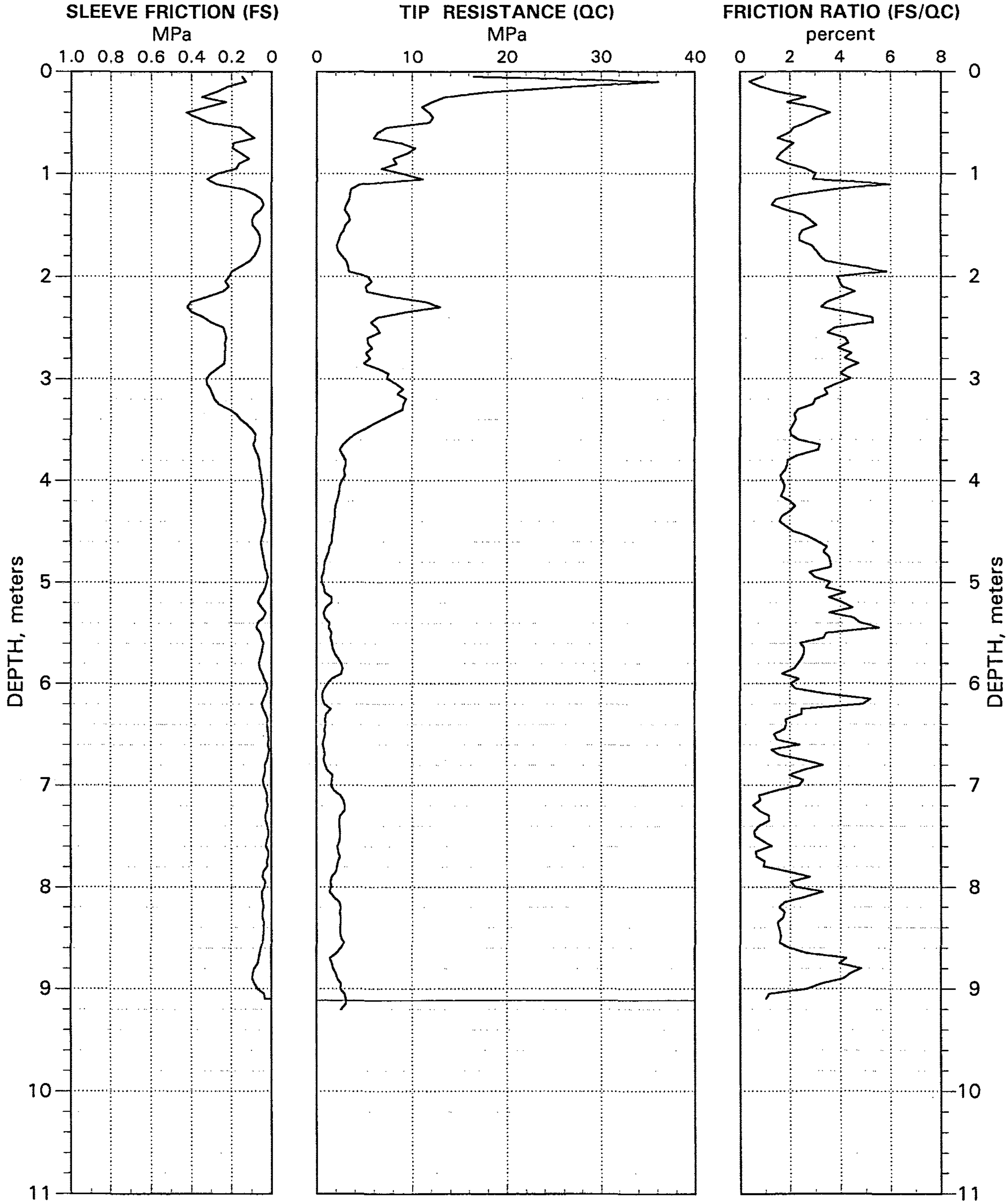
4/20/00 GUADM_CN GUADM

URS Greiner Woodward Clyde



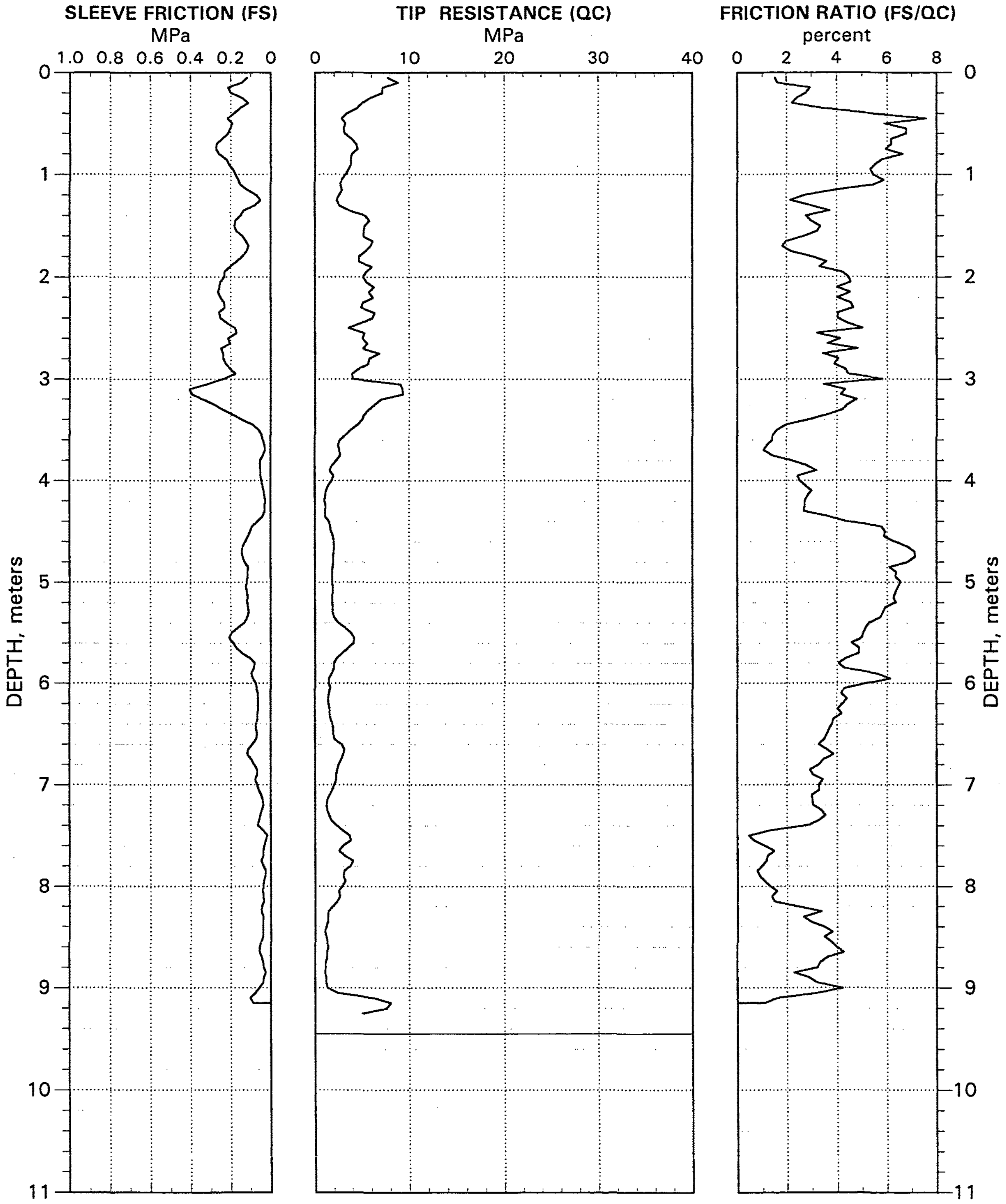
North: 600433
East: 1872450
Date: 4/13/98

Station: 11+795
Offset (m): 43
Surface Elevation: 7.6 meters (approx.)

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT

Project Number: 95-973017NB.00	CONE PENETRATION TEST SOUNDING NUMBER: EC08	Fig.F-36 Page 1 of 1

URS Greiner Woodward Clyde



North: 600240
East: 1872560
Date: 4/14/98

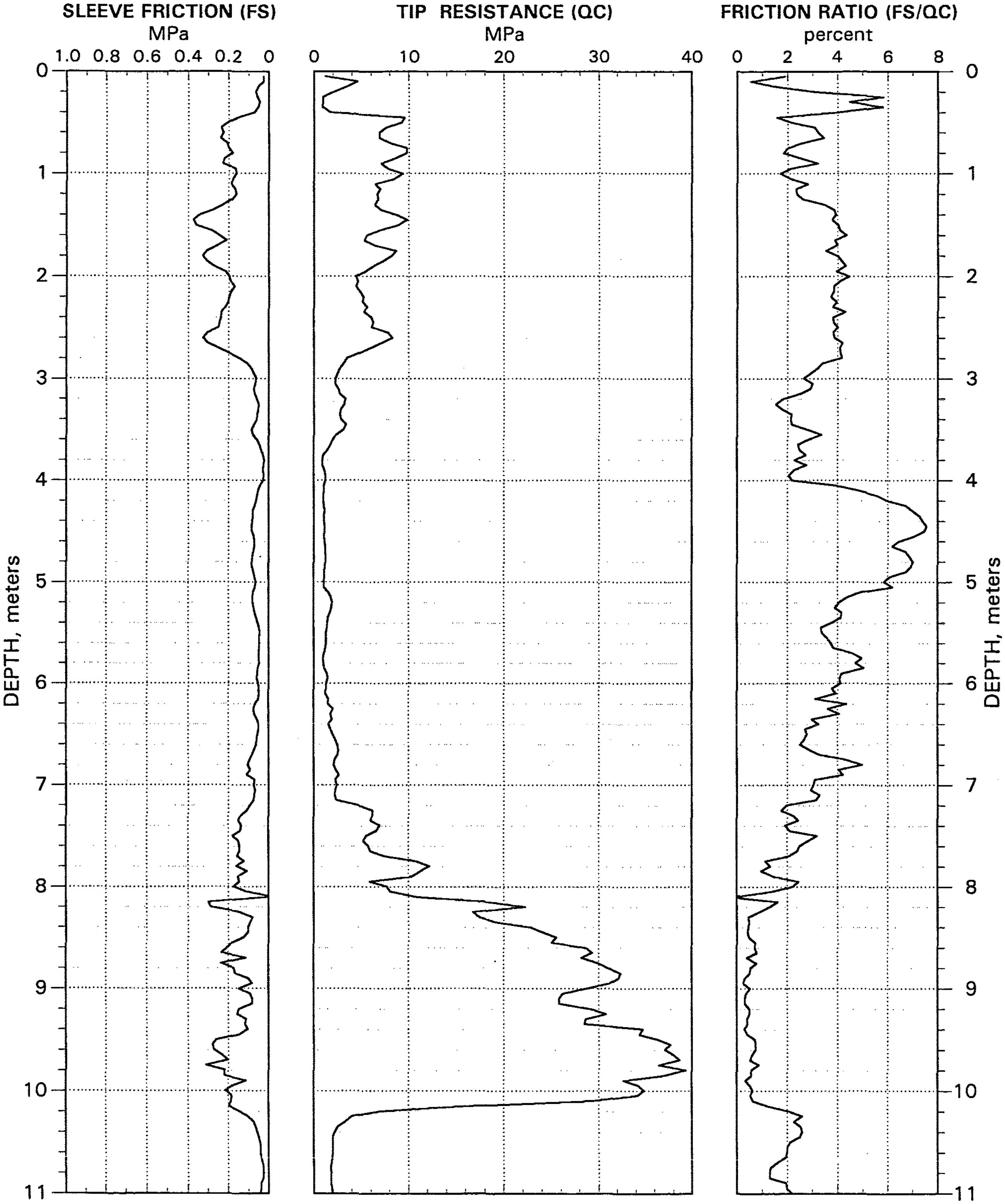
Station: 11+993
Offset (m): 63
Surface Elevation: 7.9 meters (approx.)

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT

Project Number: 95-973017NB.00	CONE PENETRATION TEST SOUNDING NUMBER: EC09	Fig.F-37 Page 1 of 1

4/20/00 GUADM_CN GUADM

URS Greiner Woodward Clyde



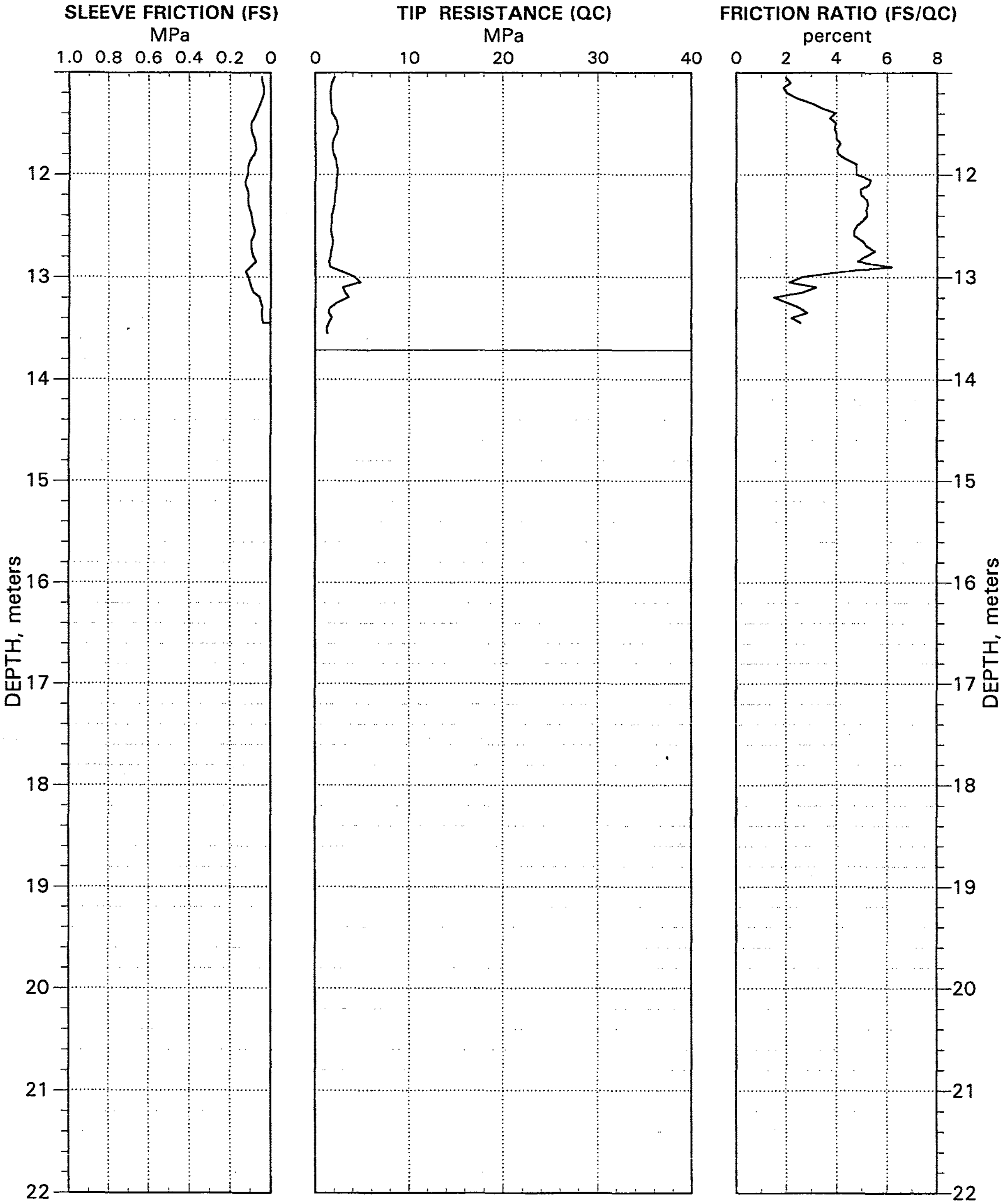
North: 599578
East: 1872803
Date: 4/14/98

Station: 12+778
Offset (m): 82
Surface Elevation: 8.5 meters (approx.)

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT

Project Number: 95-973017NB.00	CONE PENETRATION TEST SOUNDING NUMBER: EC10	Fig.F-38 Page 1 of 2

URS Greiner Woodward Clyde



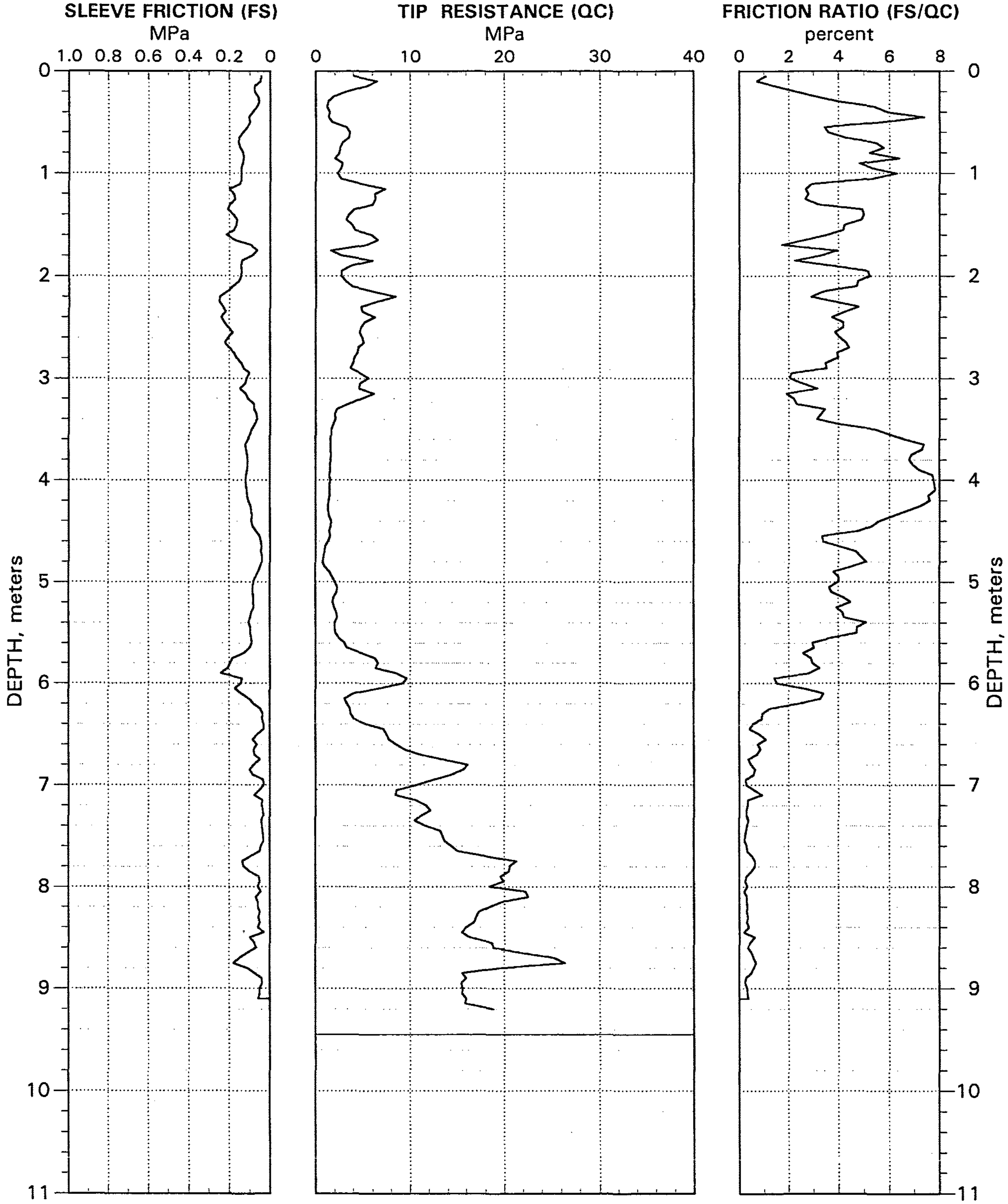
North: 599578
East: 1872803
Date: 4/14/98

Station: 12+778
Offset (m): 82
Surface Elevation: 8.5 meters (approx.)

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT

Project Number: 95-973017NB.00	CONE PENETRATION TEST SOUNDING NUMBER: EC10	Fig.F-38 Page 2 of 2

URS Greiner Woodward Clyde



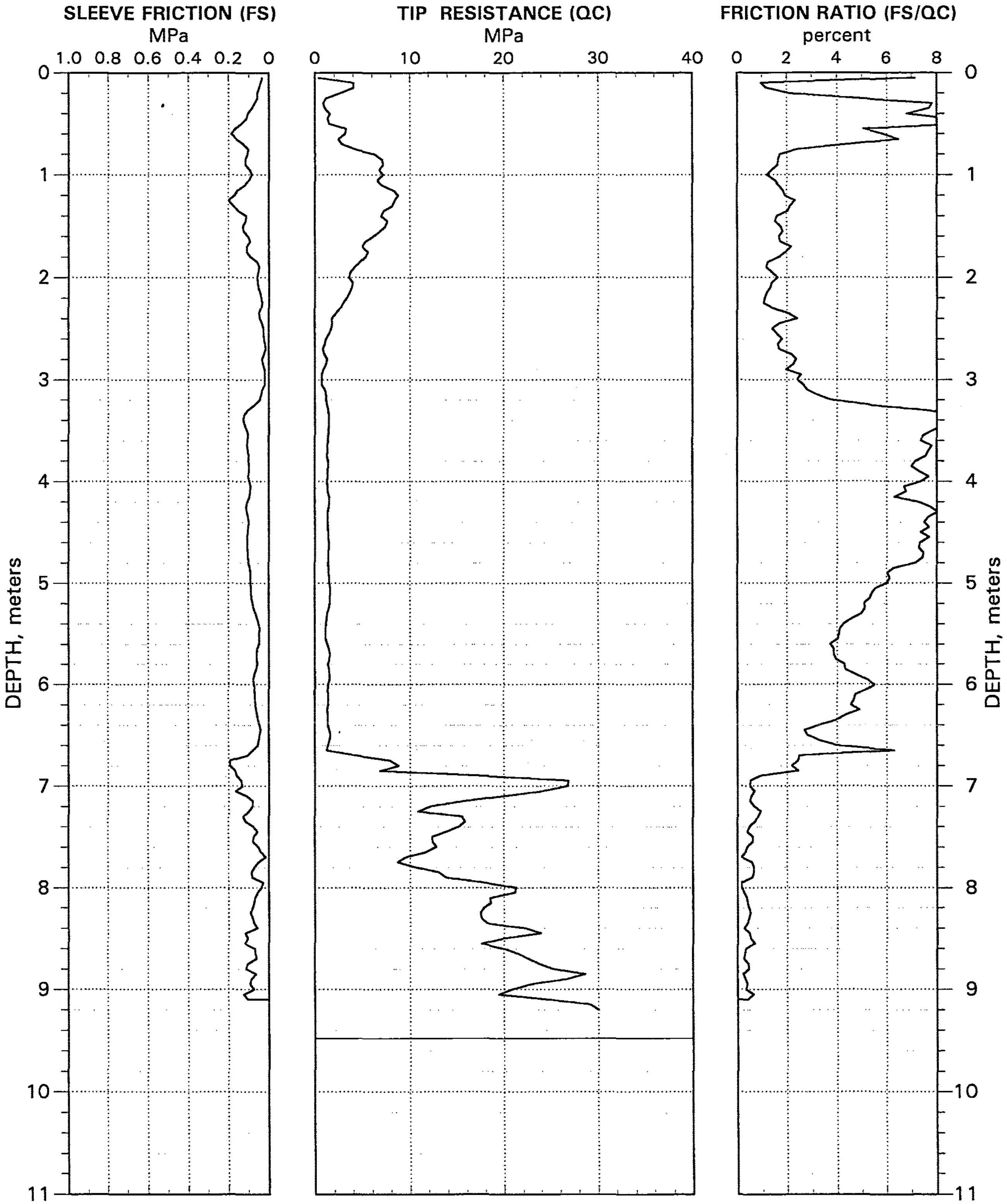
North: 599307
East: 1872924
Date: 4/14/98

Station: 13+024
Offset (m): 78
Surface Elevation: 8.8 meters (approx.)

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT

Project Number: 95-973017NB.00	CONE PENETRATION TEST SOUNDING NUMBER: EC11	Fig.F-39 Page 1 of 1

URS Greiner Woodward Clyde



North: 598932
East: 1872797
Date: 4/14/98

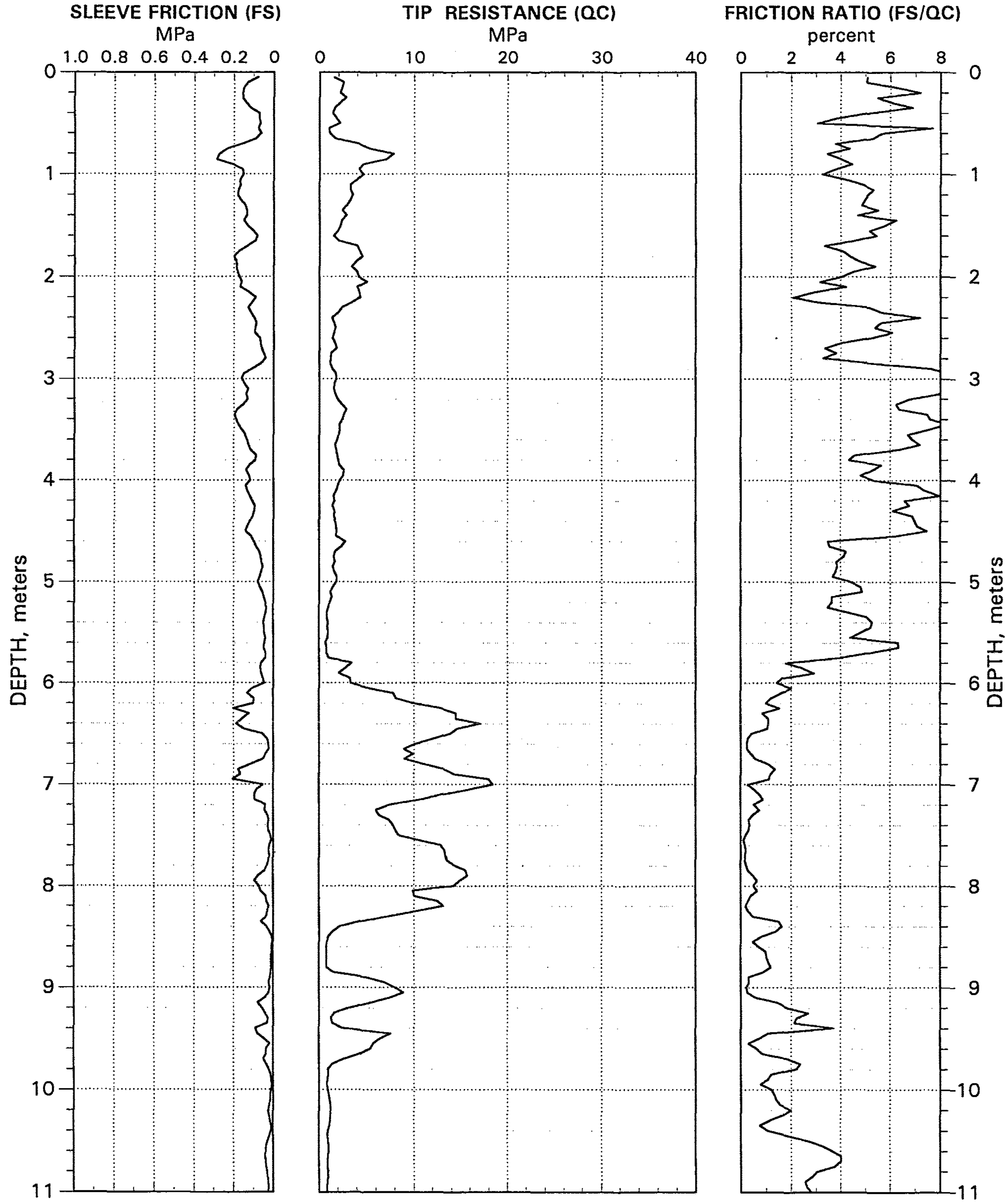
Station: 13+377
Offset (m): 78
Surface Elevation: 9.1 meters (approx.)

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT

Project Number: 95-973017NB.00	CONE PENETRATION TEST SOUNDING NUMBER: EC12	Fig.F-40 Page 1 of 1

4/20/00 GUADM_CN GUADM

URS Greiner Woodward Clyde



North: 597783
East: 1873359
Date: 4/16/98

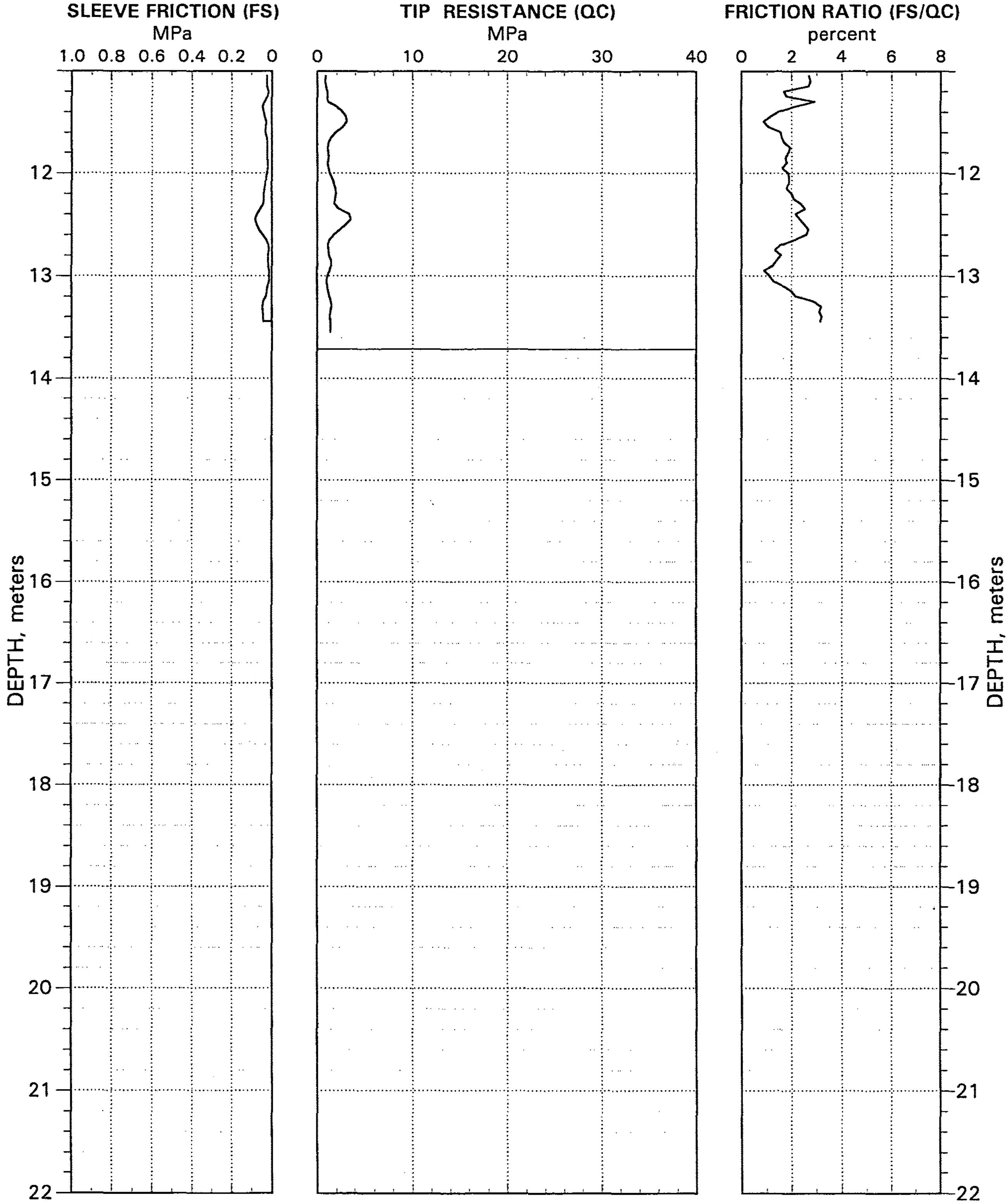
Station: 14+981
Offset (m): 42
Surface Elevation: 12.5 meters (approx.)

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT

Project Number: 95-973017NB.00	CONE PENETRATION TEST SOUNDING NUMBER: EC13	Fig.F-41 Page 1 of 2

4/20/00 GUADM_CN GUADM

URS Greiner Woodward Clyde



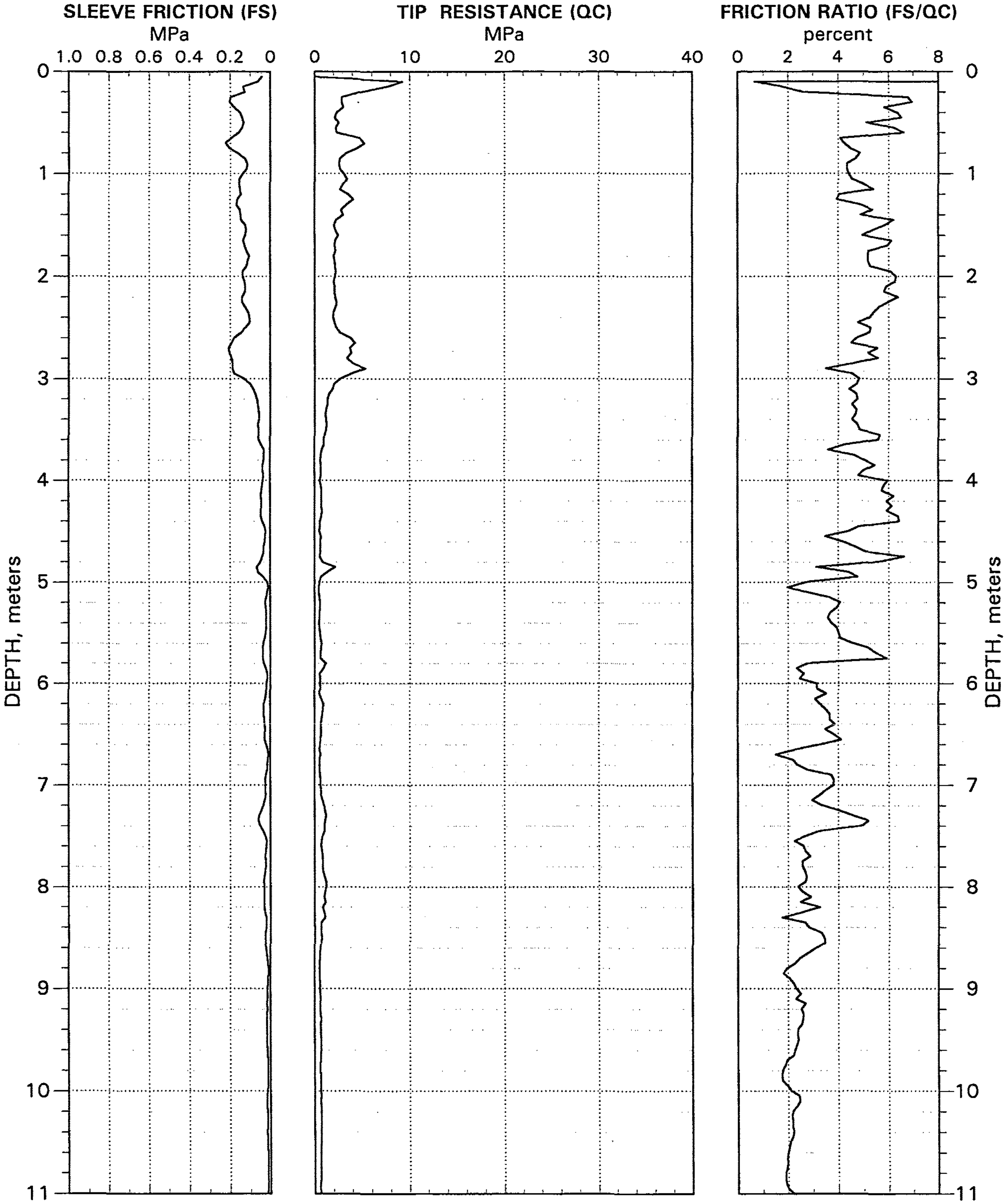
North: 597783
East: 1873359
Date: 4/16/98

Station: 14+981
Offset (m): 42
Surface Elevation: 12.5 meters (approx.)

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT

Project Number: 95-973017NB.00	CONE PENETRATION TEST SOUNDING NUMBER: EC13	Fig.F-41 Page 2 of 2

URS Greiner Woodward Clyde

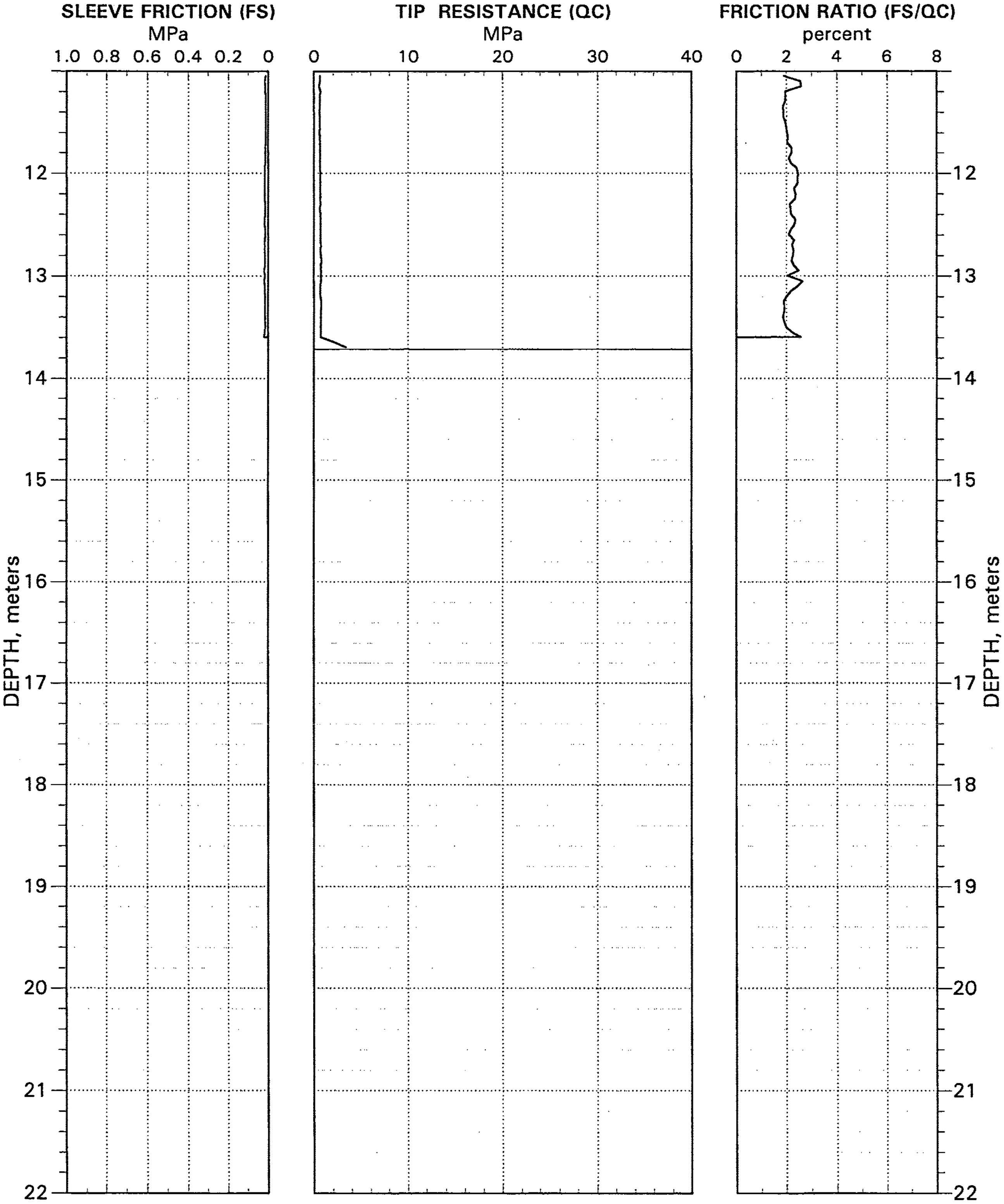


North: 603234
East: 1869889
Date: 4/15/98

Station: 7+710
Offset (m): -46
Surface Elevation: 4.9 meters (approx.)

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT

Project Number: 95-973017NB.00	CONE PENETRATION TEST SOUNDING NUMBER: WC01	Fig.F-42 Page 1 of 2



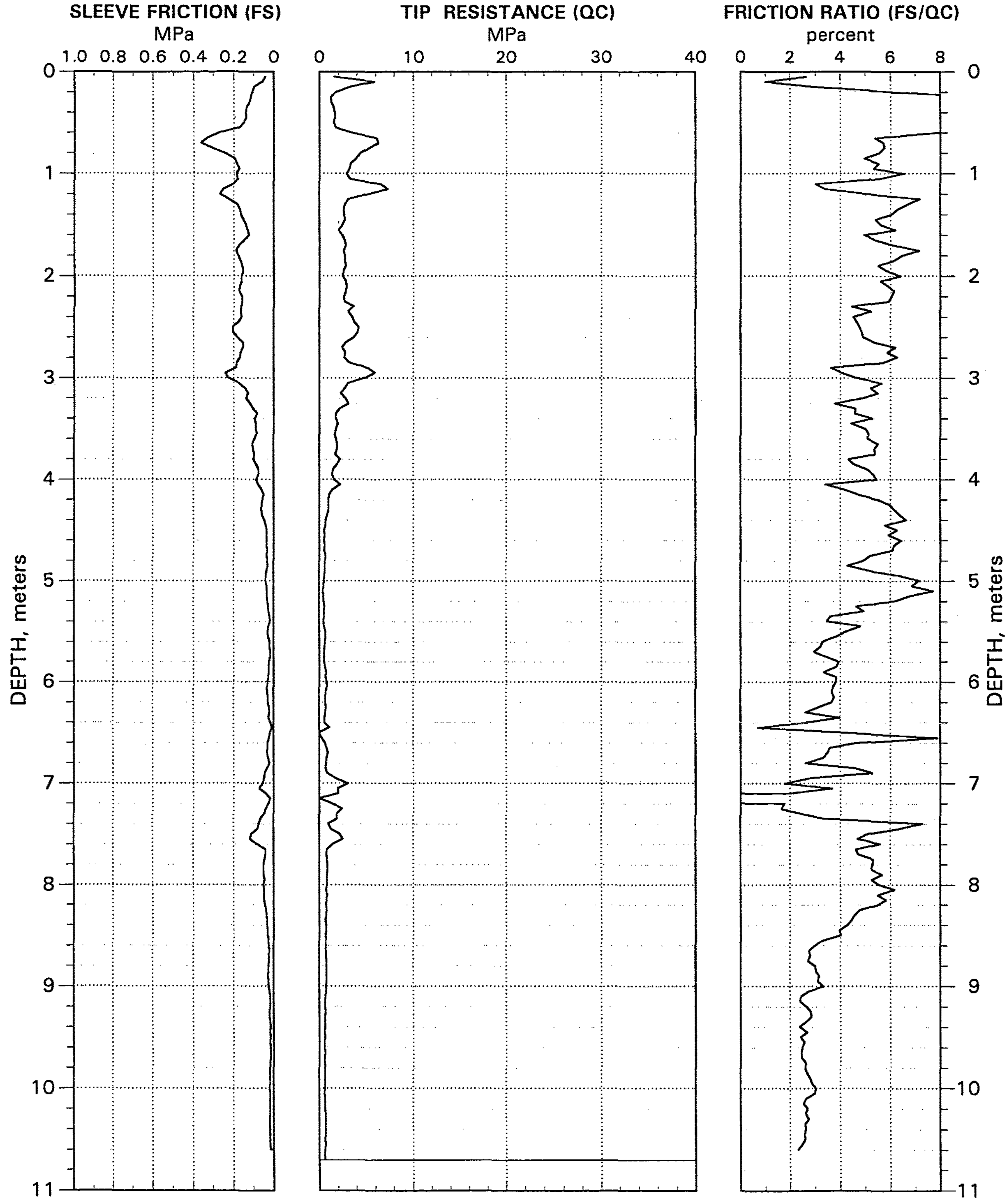
North: 603234
East: 1869889
Date: 4/15/98

Station: 7+710
Offset (m): -46
Surface Elevation: 4.9 meters (approx.)

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT

Project Number: 95-973017NB.00	CONE PENETRATION TEST SOUNDING NUMBER: WC01	Fig.F-42 Page 2 of 2

URS Greiner Woodward Clyde



North: 603063
East: 1870009
Date: 4/15/98

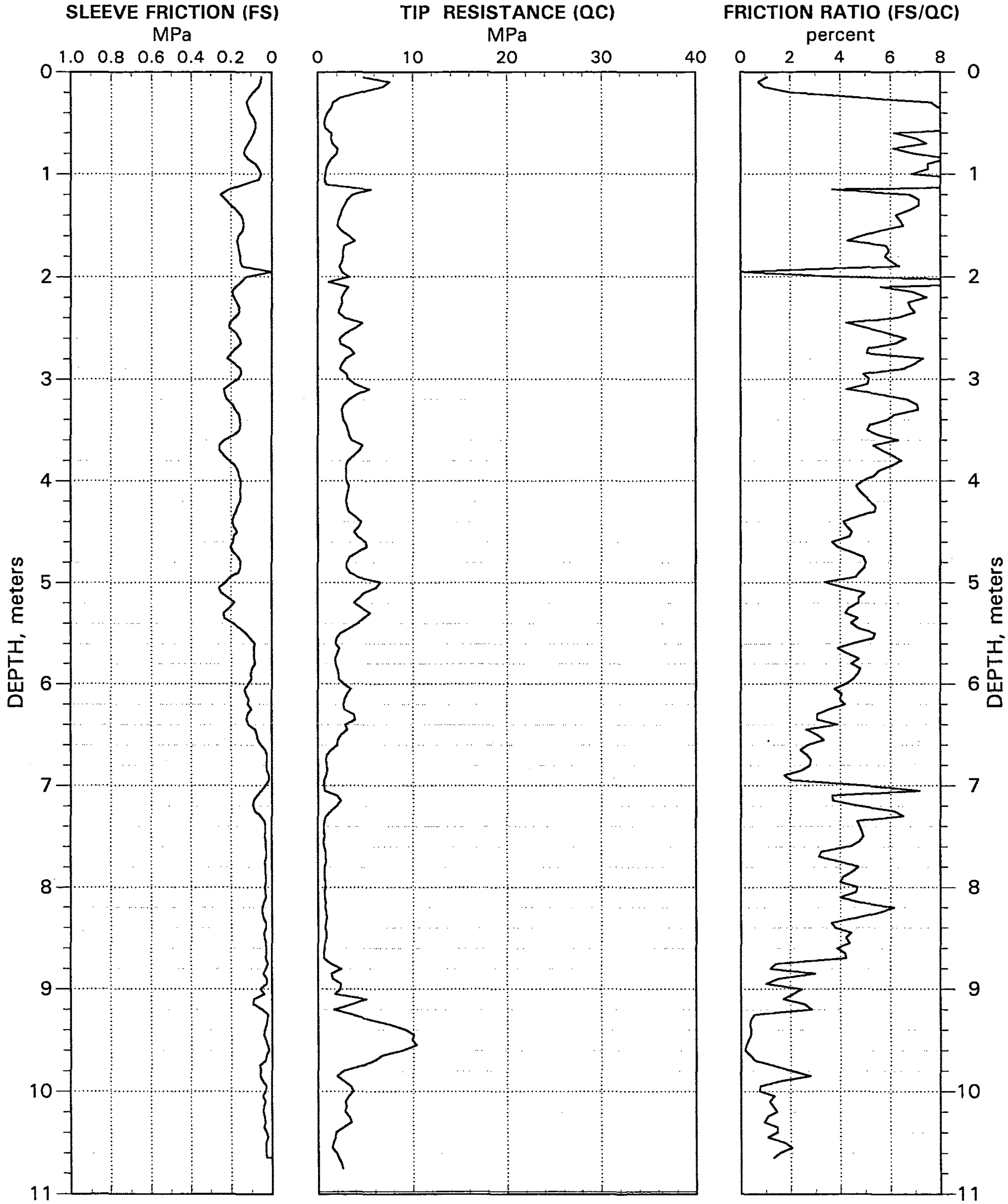
Station: 7+945
Offset (m): -41
Surface Elevation: 5.2 meters (approx.)

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT

Project Number: 95-973017NB.00	CONE PENETRATION TEST SOUNDING NUMBER: WC02	Fig.F-43 Page 1 of 1

4/20/00 GUADM_CN GUADM

URS Greiner Woodward Clyde



North: 601984
East: 1870659
Date: 4/13/98

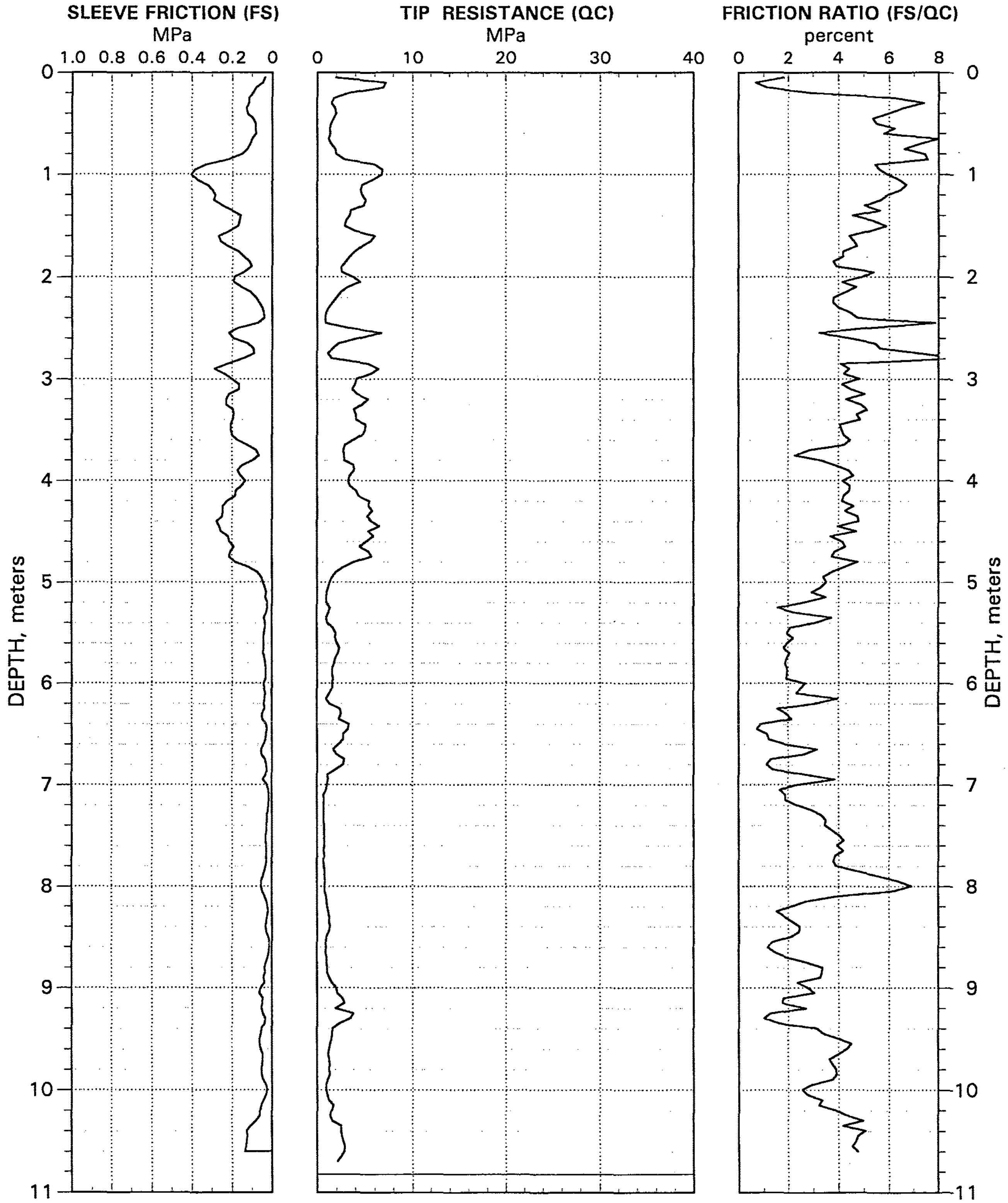
Station: 9+194
Offset (m): -49
Surface Elevation: 6.4 meters (approx.)

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT

Project Number: 95-973017NB.00	CONE PENETRATION TEST SOUNDING NUMBER: WC03	Fig.F-44 Page 1 of 1

4/20/00 GUADM_CN GUADM

URS Greiner Woodward Clyde



North: 601465
East: 1871373
Date: 4/13/98

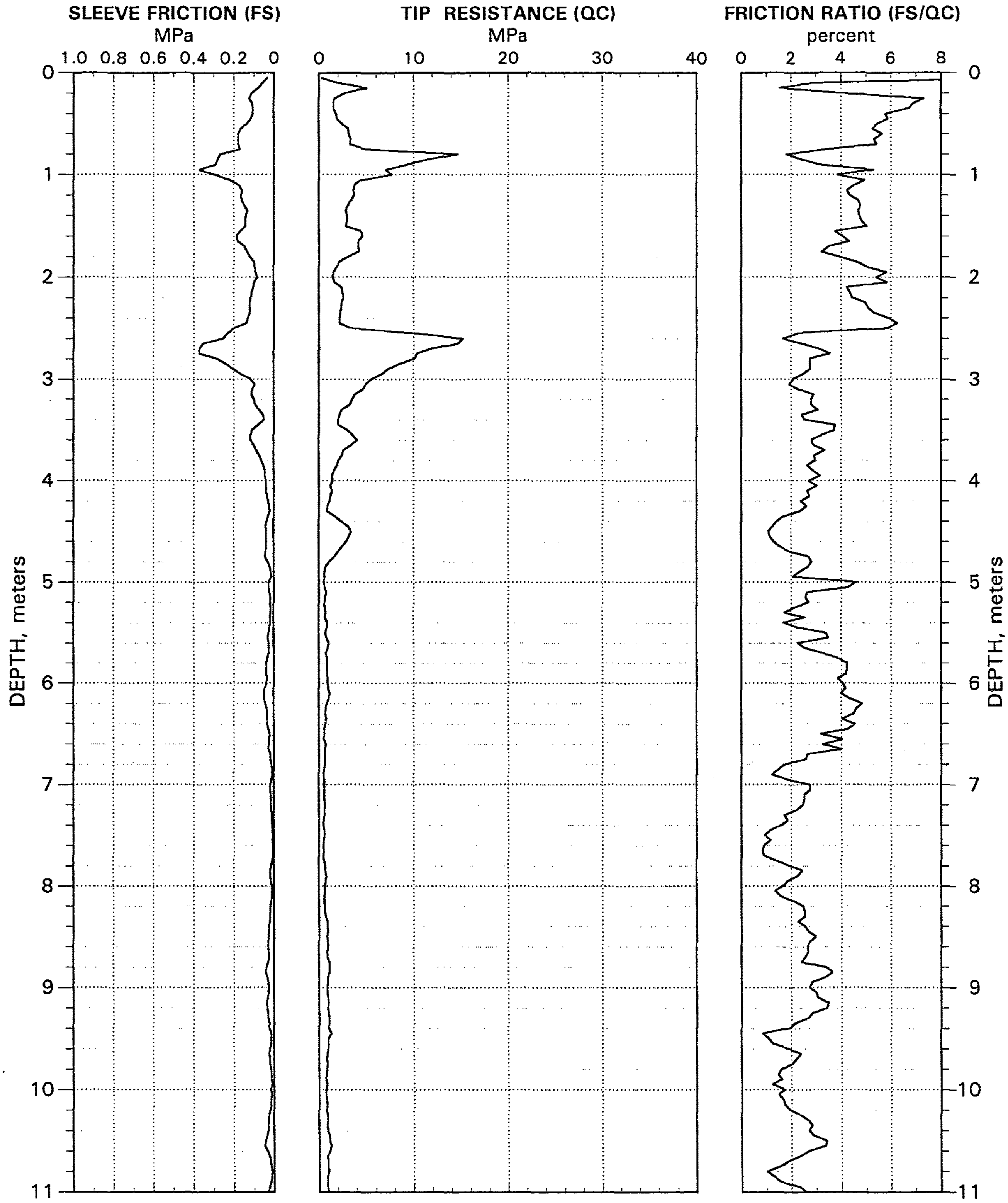
Station: 10+110
Offset (m): -49
Surface Elevation: 7.0 meters (approx.)

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT

Project Number: 95-973017NB.00	CONE PENETRATION TEST SOUNDING NUMBER: WC04	Fig.F-45 Page 1 of 1

4/20/00 GUADM_CN GUADM

URS Greiner Woodward Clyde



North: 600929
East: 1872153
Date: 4/13/98

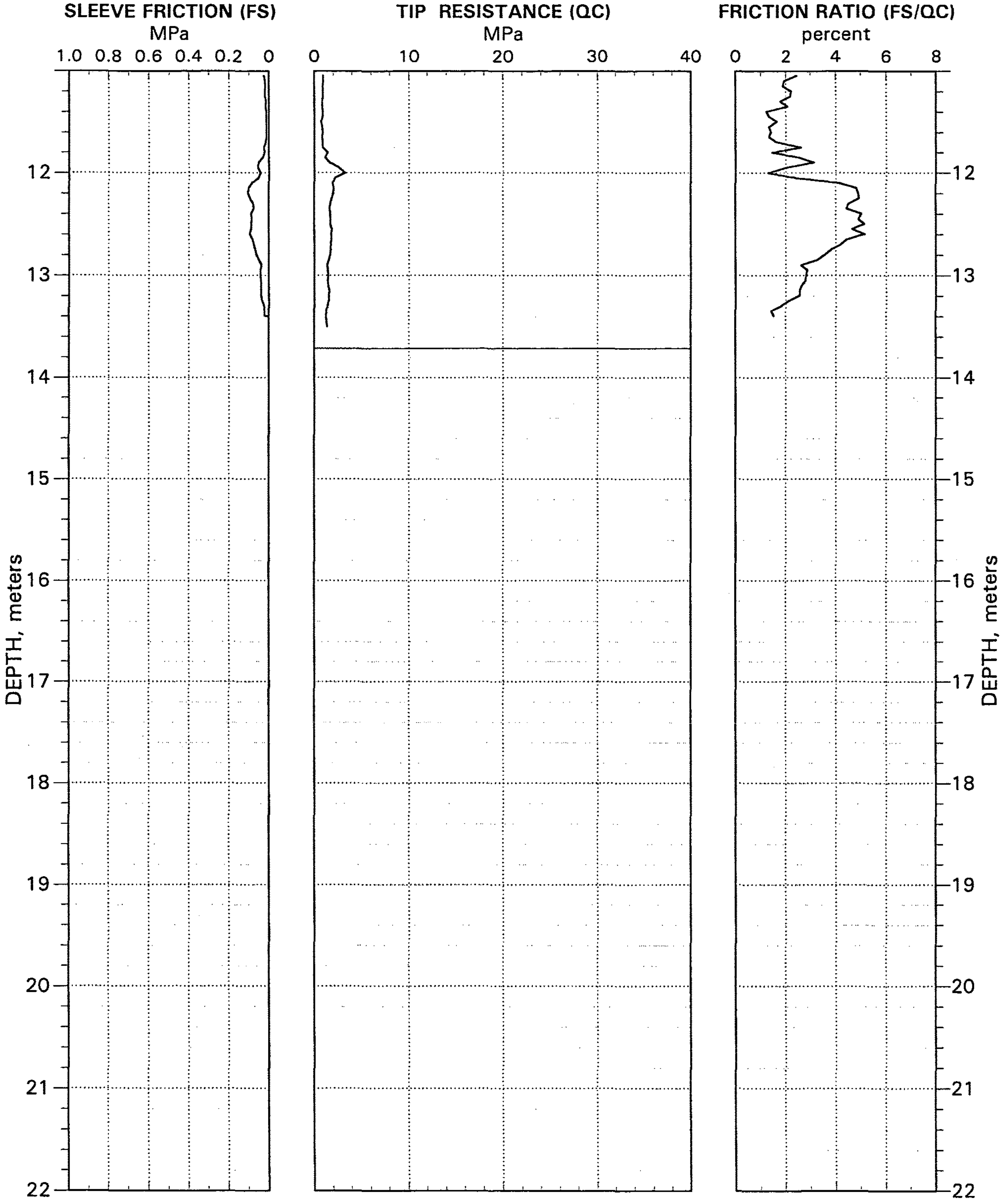
Station: 11+056
Offset (m): -33
Surface Elevation: 7.0 meters (approx.)

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT

Project Number: 95-973017NB.00	CONE PENETRATION TEST SOUNDING NUMBER: WC05	Fig.F-46 Page 1 of 2

4/20/00 GUADM_CN GUADM

URS Greiner Woodward Clyde



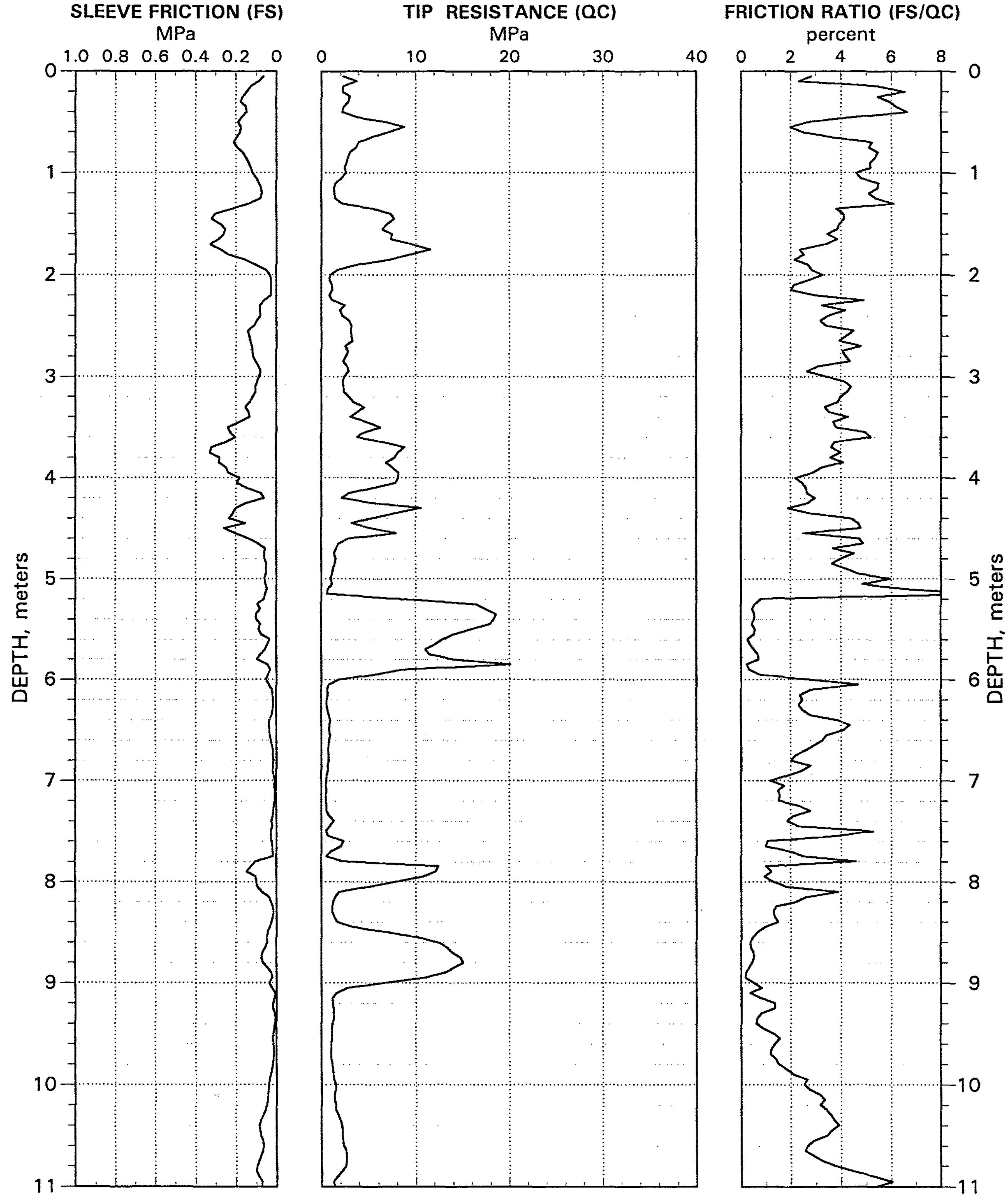
North: 600929
East: 1872153
Date: 4/13/98

Station: 11+056
Offset (m): -33
Surface Elevation: 7.0 meters (approx.)

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT

Project Number: 95-973017NB.00	CONE PENETRATION TEST SOUNDING NUMBER: WC05	Fig.F-46 Page 2 of 2

URS Greiner Woodward Clyde



North: 598901
East: 1872621
Date: 4/14/98

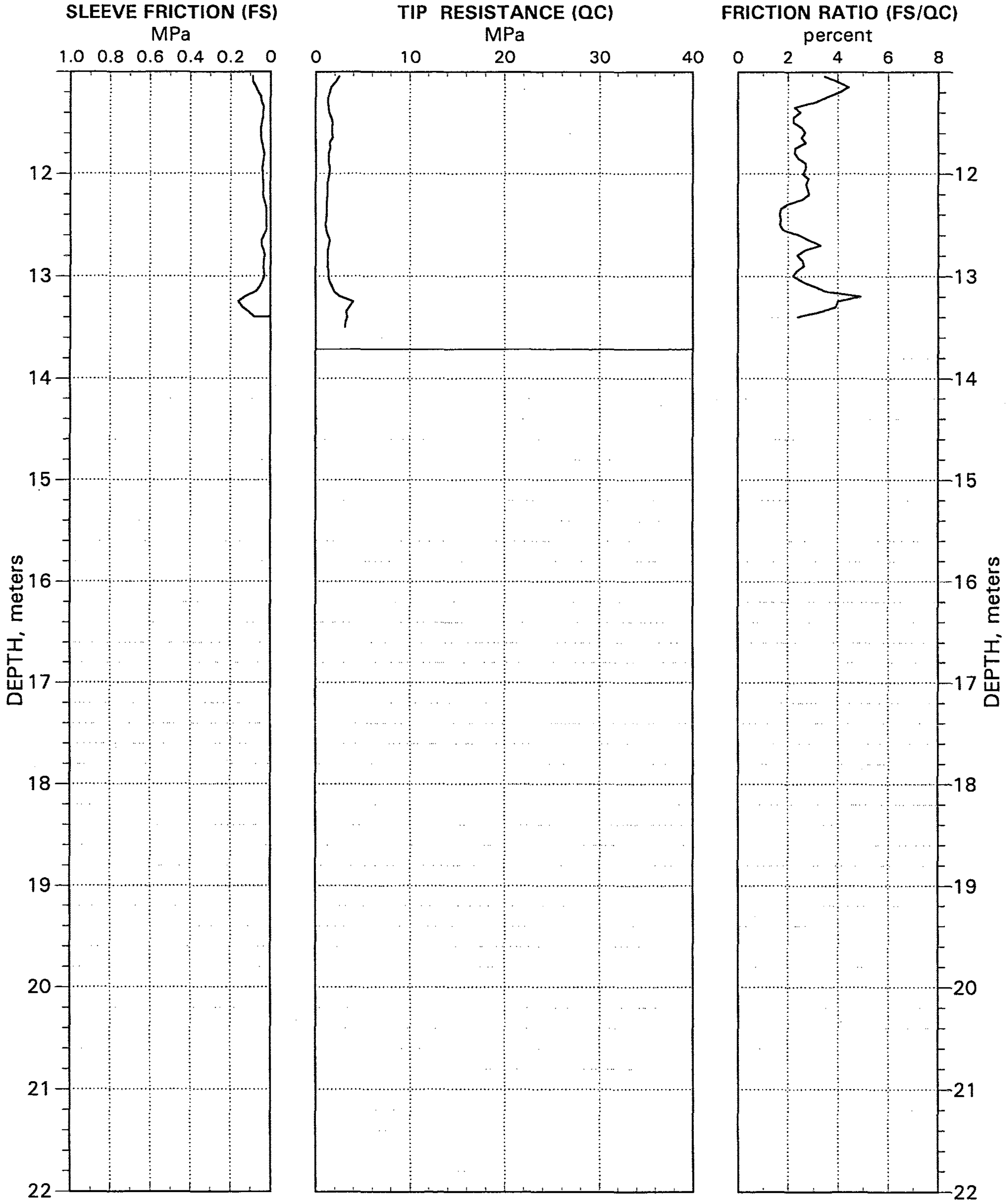
Station: 13+510
Offset (m): -36
Surface Elevation: 9.1 meters (approx.)

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT

Project Number: 95-973017NB.00	CONE PENETRATION TEST SOUNDING NUMBER: WC06	Fig.F-47 Page 1 of 2

4/20/00 GUADM_CN GUADM

URS Greiner Woodward Clyde



North: 598901
East: 1872621
Date: 4/14/98

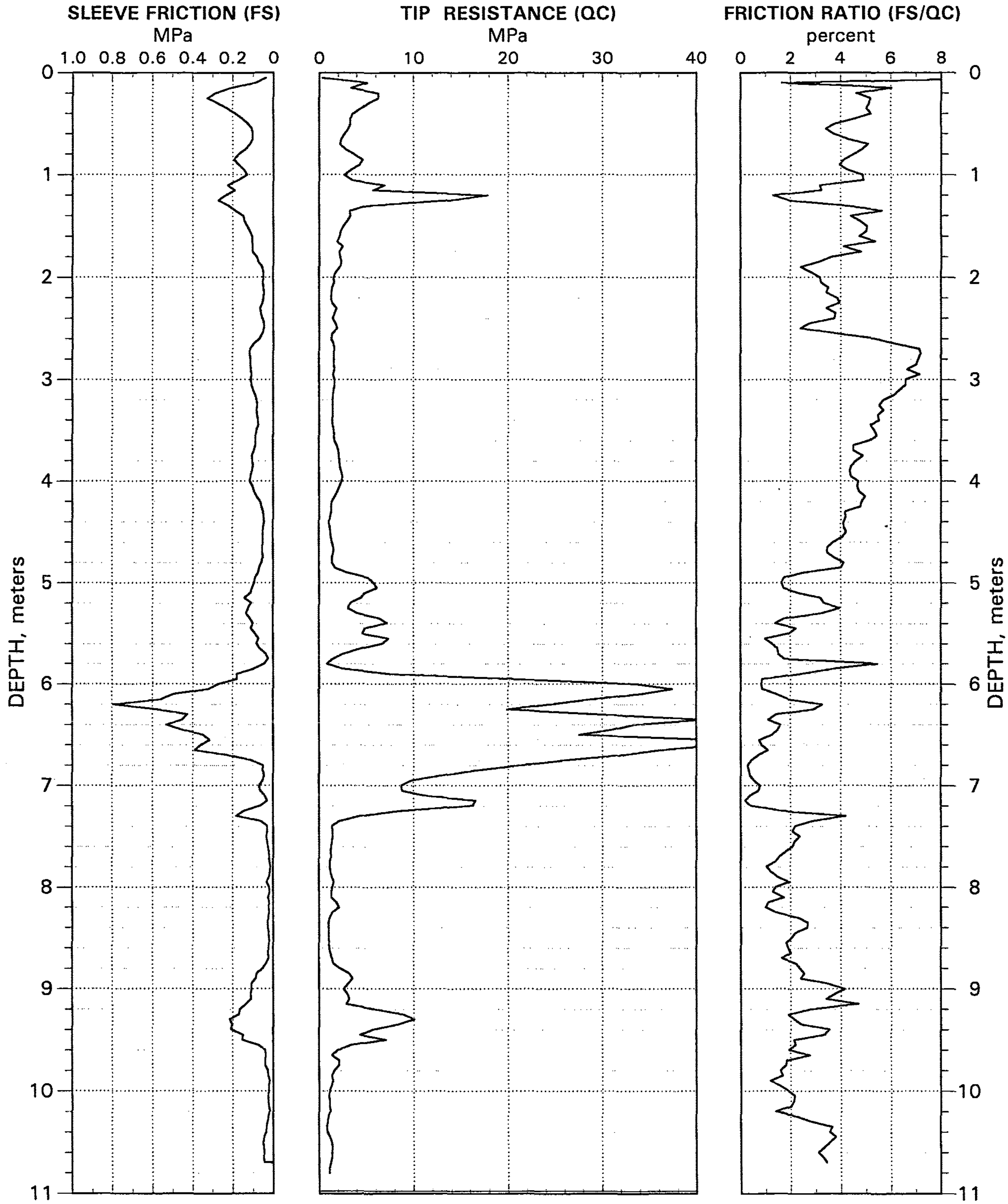
Station: 13+510
Offset (m): -36
Surface Elevation: 9.1 meters (approx.)

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT

Project Number: 95-973017NB.00	CONE PENETRATION TEST SOUNDING NUMBER: WC06	Fig.F-47 Page 2 of 2

4/20/00 GUADM_CN GUADM

URS Greiner Woodward Clyde



North: 598644
East: 1872629
Date: 4/14/98

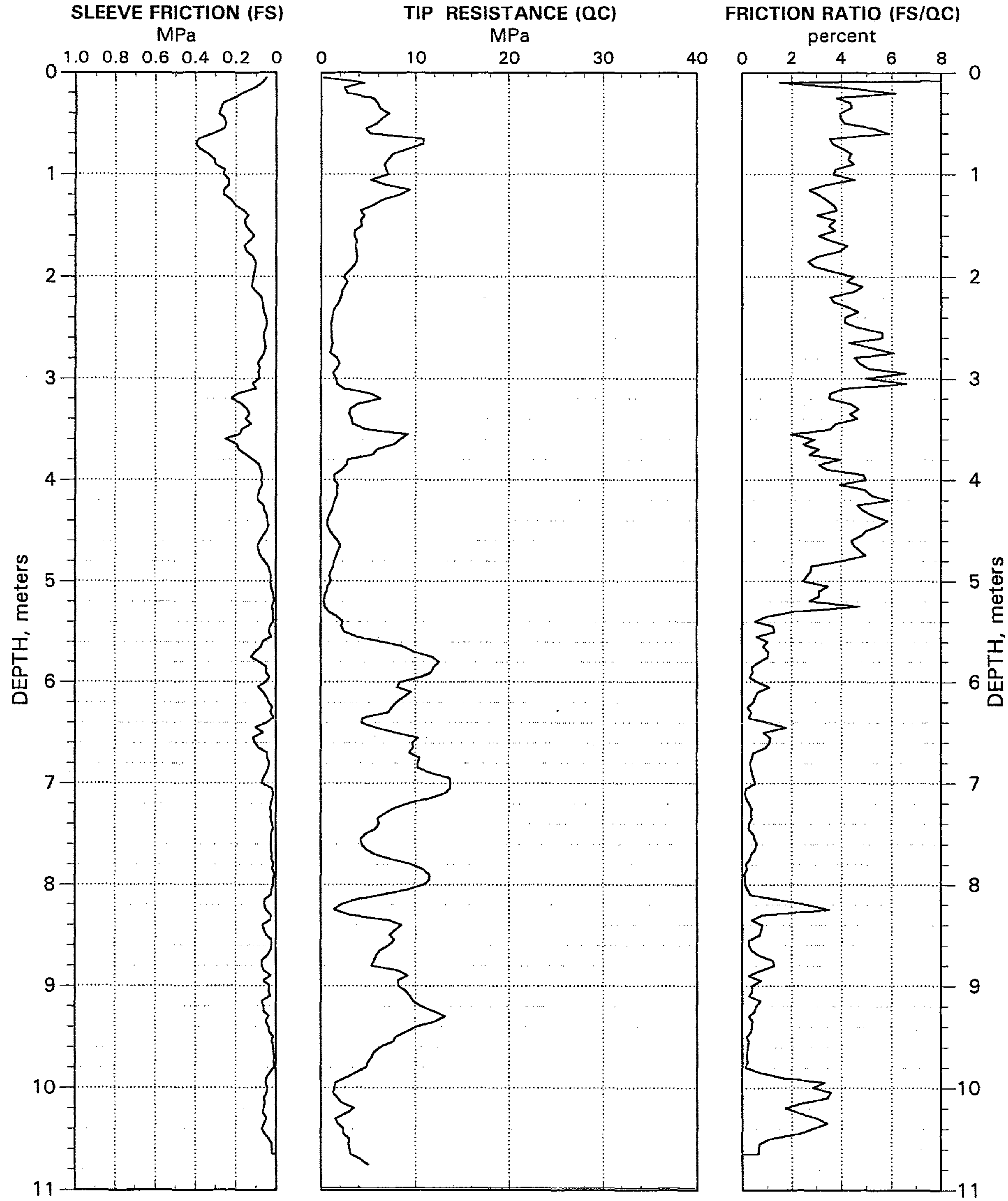
Station: 13+748
Offset (m): -38
Surface Elevation: 9.8 meters (approx.)

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT

Project Number: 95-973017NB.00	CONE PENETRATION TEST SOUNDING NUMBER: WC07	Fig.F-48 Page 1 of 1

4/20/00 GUADM_CN GUADM

URS Greiner Woodward Clyde



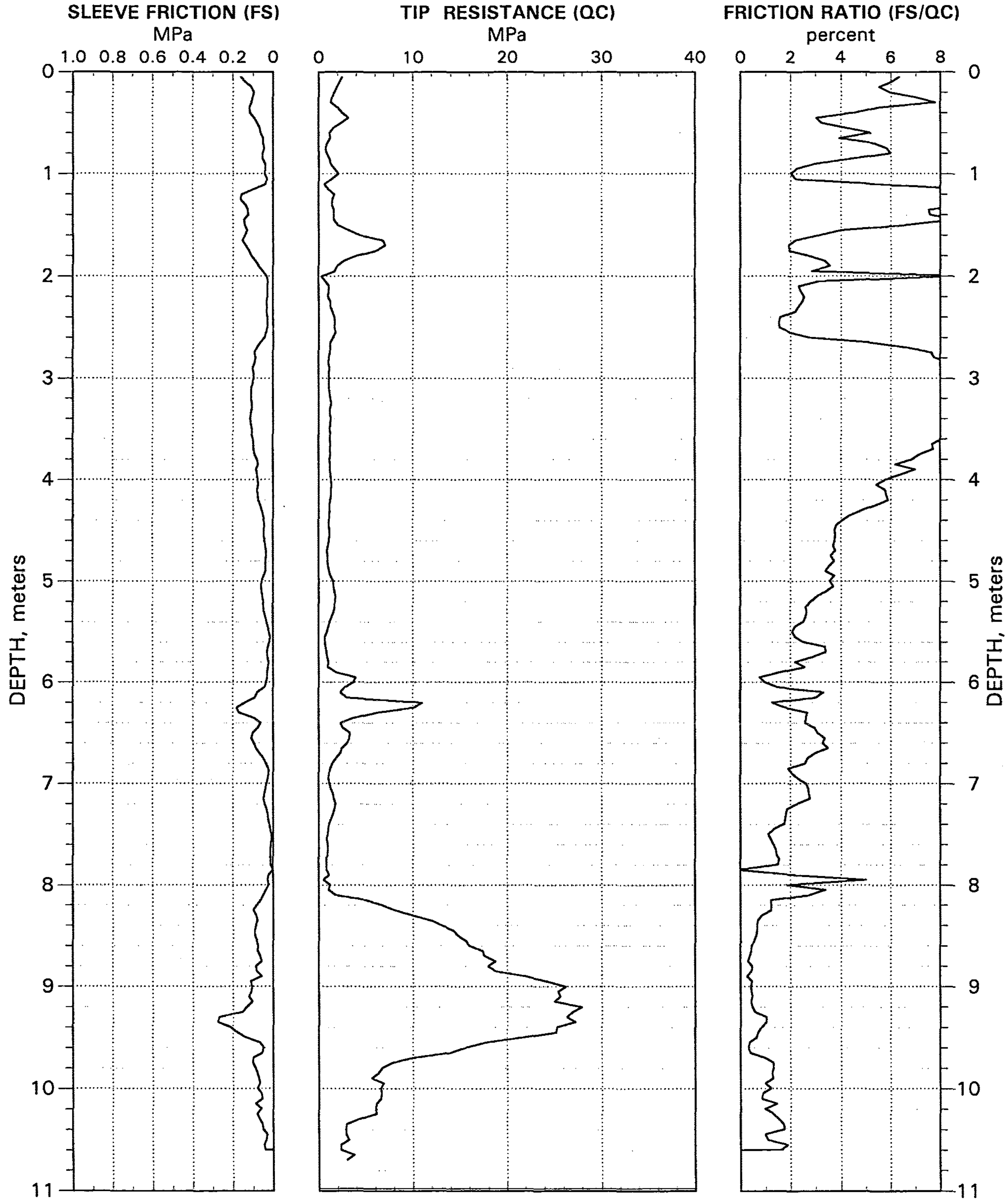
North: 598443
East: 1872737
Date: 4/14/98

Station: 13+956
Offset (m): -40
Surface Elevation: 10.1 meters (approx.)

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT

Project Number: 95-973017NB.00	CONE PENETRATION TEST SOUNDING NUMBER: WC08	Fig.F-49 Page 1 of 1

URS Greiner Woodward Clyde



North: 597682
East: 1873351
Date: 4/16/98

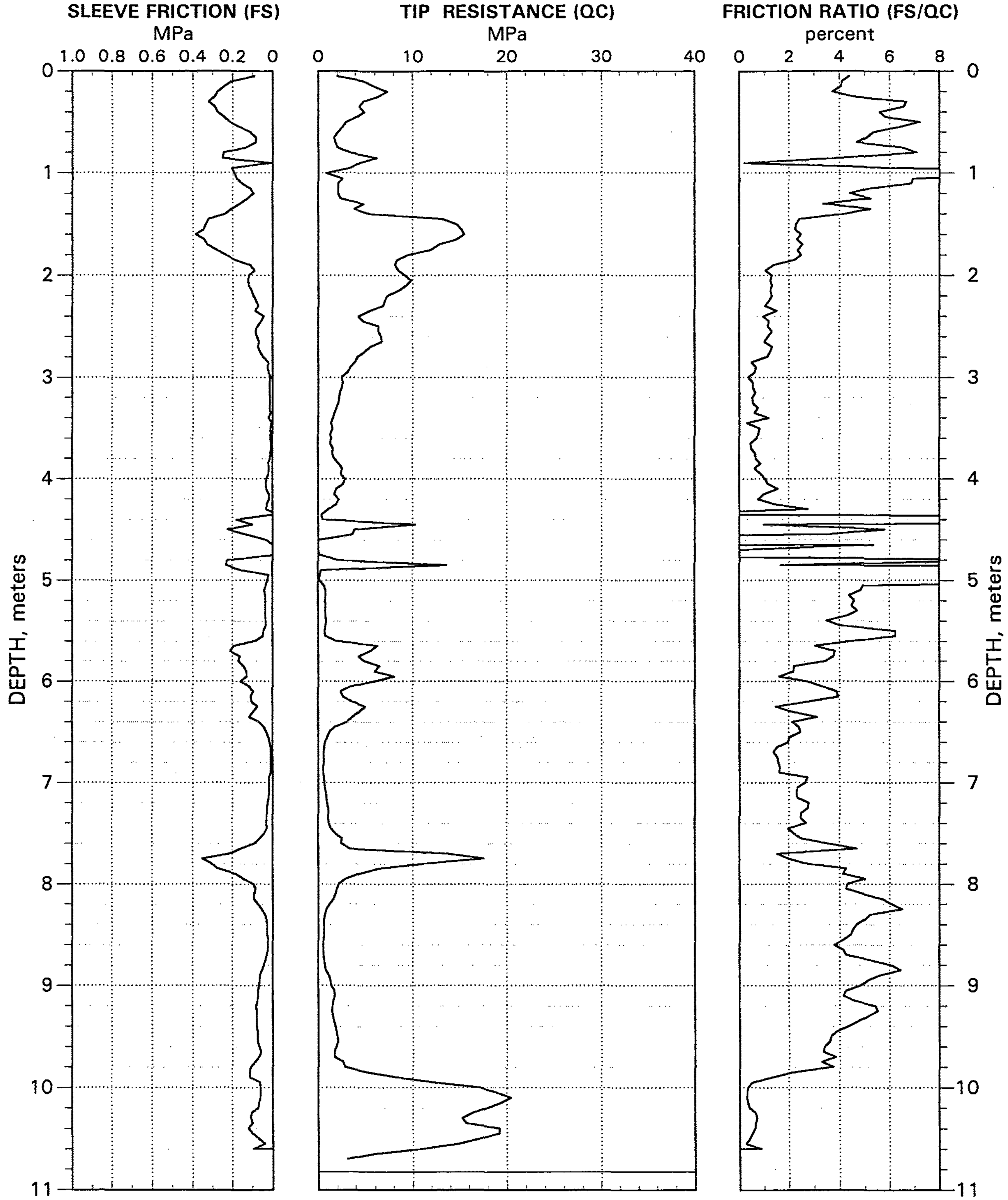
Station: 15+029
Offset (m): -47
Surface Elevation: 13.4 meters (approx.)

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT

Project Number: 95-973017NB.00	CONE PENETRATION TEST SOUNDING NUMBER: WC09	Fig.F-50 Page 1 of 1

4/20/00 GUADM_CN GUADM

URS Greiner Woodward Clyde



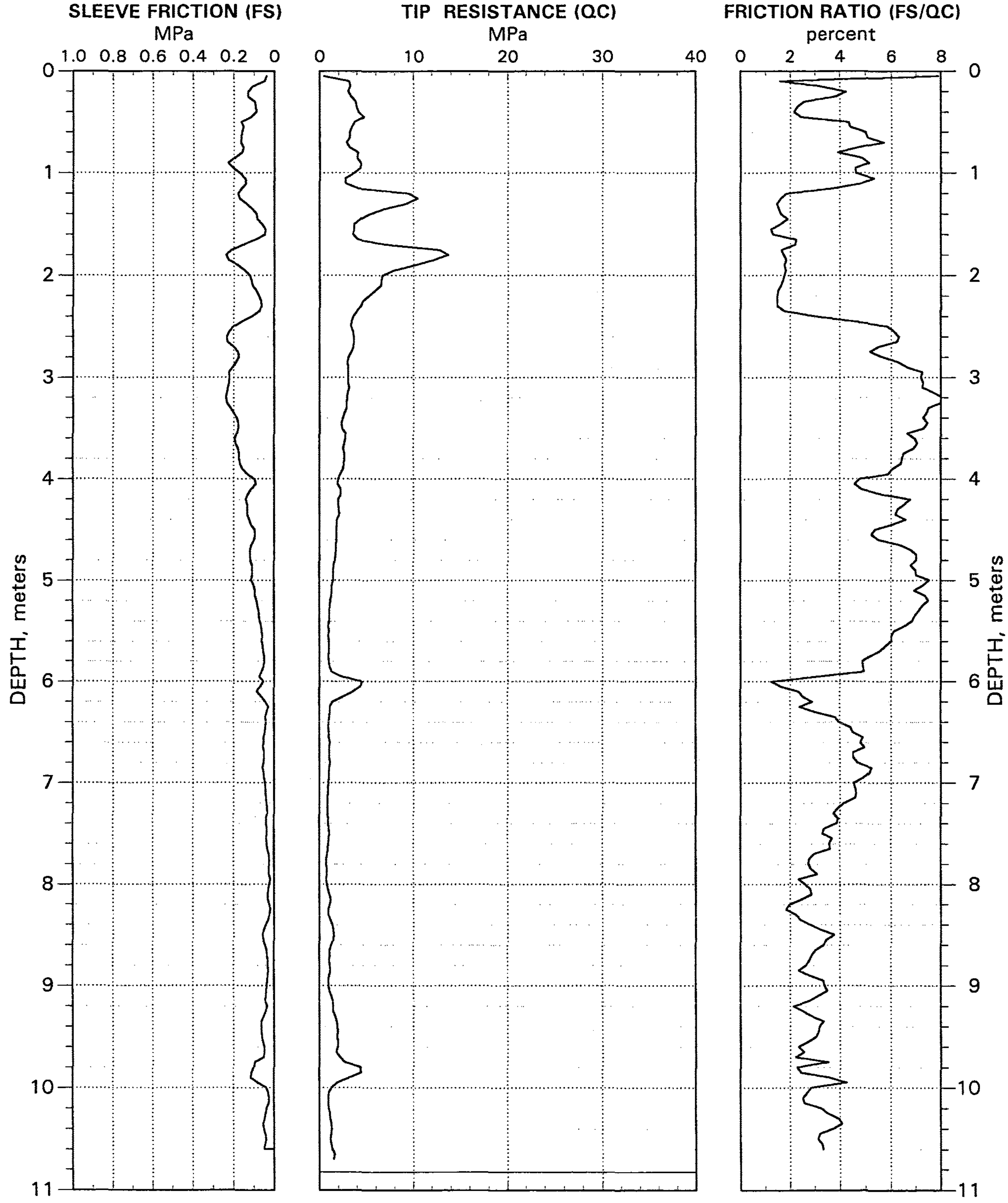
North: 597259
East: 1873706
Date: 4/16/98

Station: 15+601
Offset (m): -37
Surface Elevation: 13.1 meters (approx.)

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT

Project Number: 95-973017NB.00	CONE PENETRATION TEST SOUNDING NUMBER: WC10	Fig.F-51 Page 1 of 1

URS Greiner Woodward Clyde

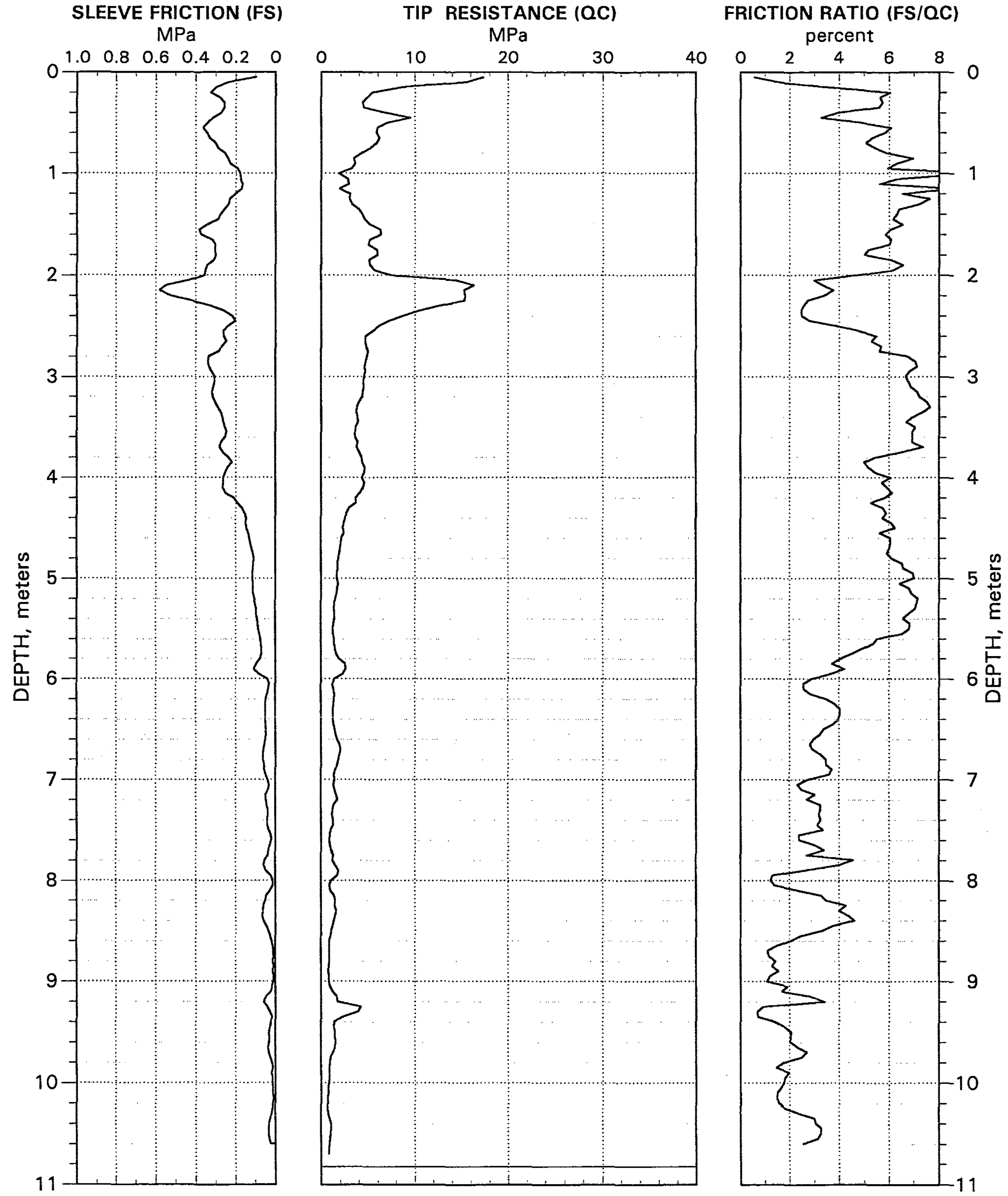


North: 597084
East: 1873958
Date: 4/16/98

Station: 15+895
Offset (m): -33
Surface Elevation: 14.6 meters (approx.)

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT

Project Number: 95-973017NB.00	CONE PENETRATION TEST SOUNDING NUMBER: WC11	Fig.F-52 Page 1 of 1



North: 596908
East: 1874163
Date: 4/16/98

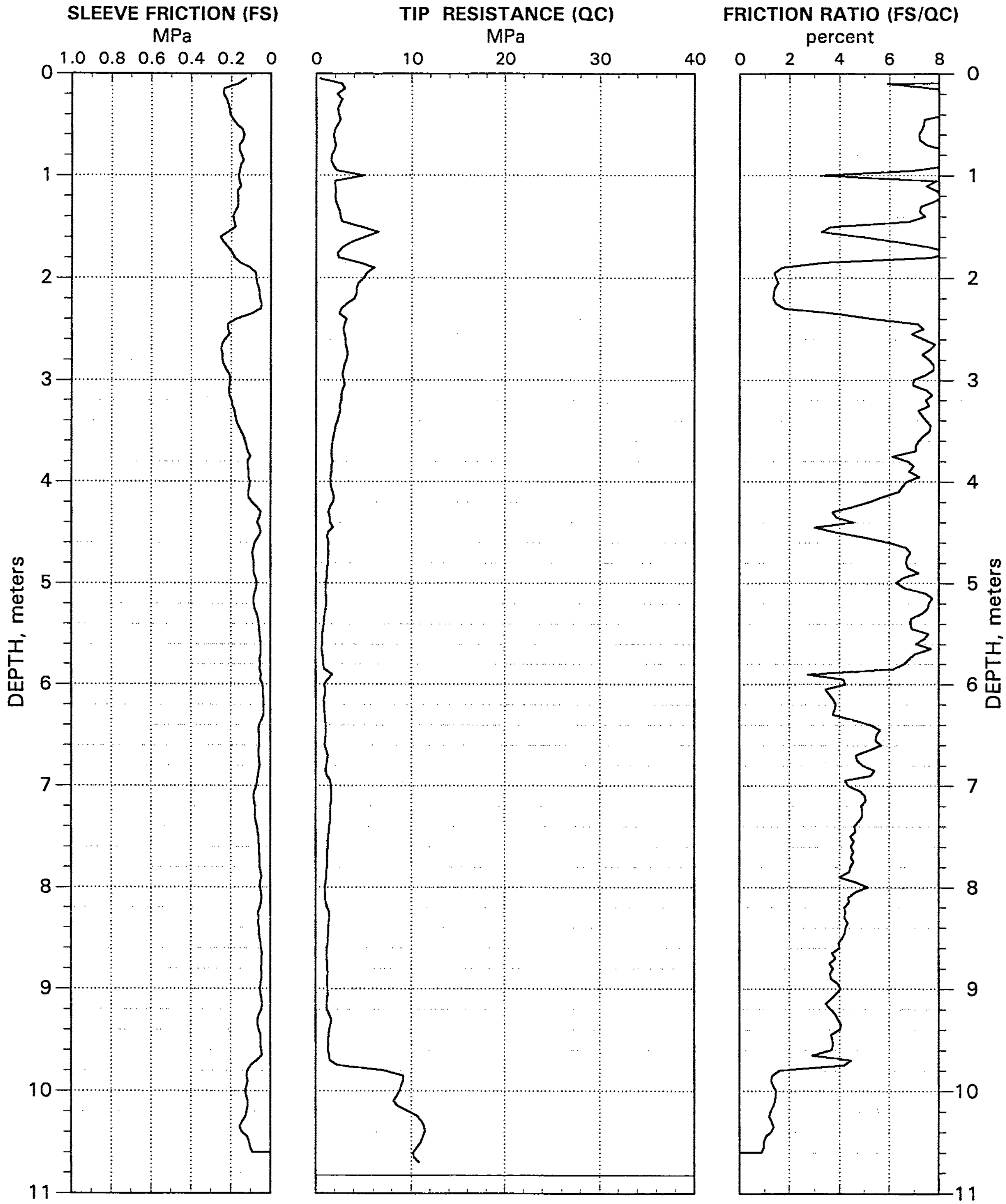
Station: 16+189
Offset (m): -36
Surface Elevation: 14.9 meters (approx.)

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT

Project Number: 95-973017NB.00	CONE PENETRATION TEST SOUNDING NUMBER: WC12	Fig.F-53 Page 1 of 1

4/20/00 GUADM_CN GUADM

URS Greiner Woodward Clyde



North: 596642
East: 1874317
Date: 4/16/98

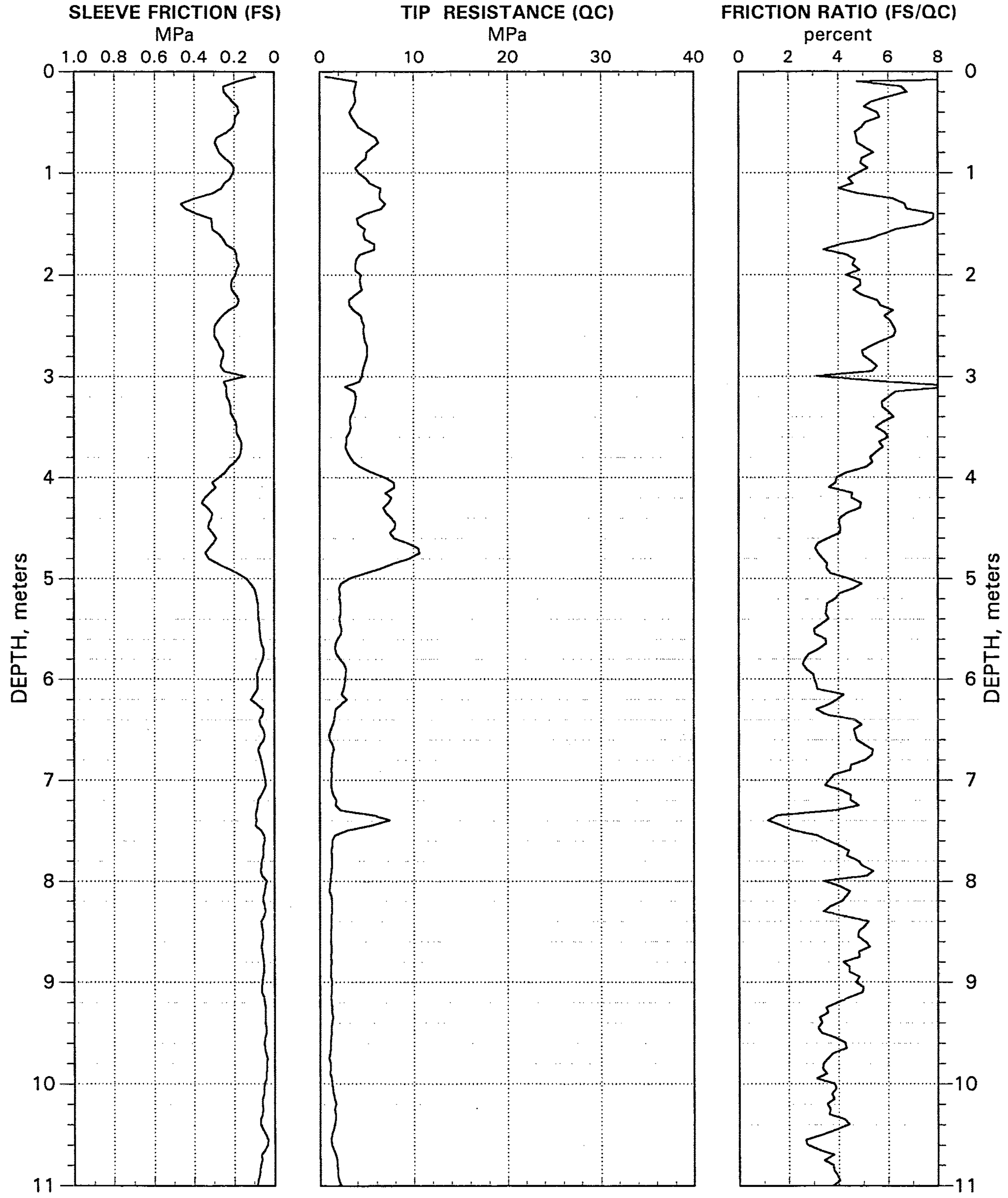
Station: 16+498
Offset (m): -39
Surface Elevation: 15.5 meters (approx.)

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT

Project Number: 95-973017NB.00	CONE PENETRATION TEST SOUNDING NUMBER: WC13	Fig.F-54 Page 1 of 1

4/20/00 GUADM_CN GUADM

URS Greiner Woodward Clyde



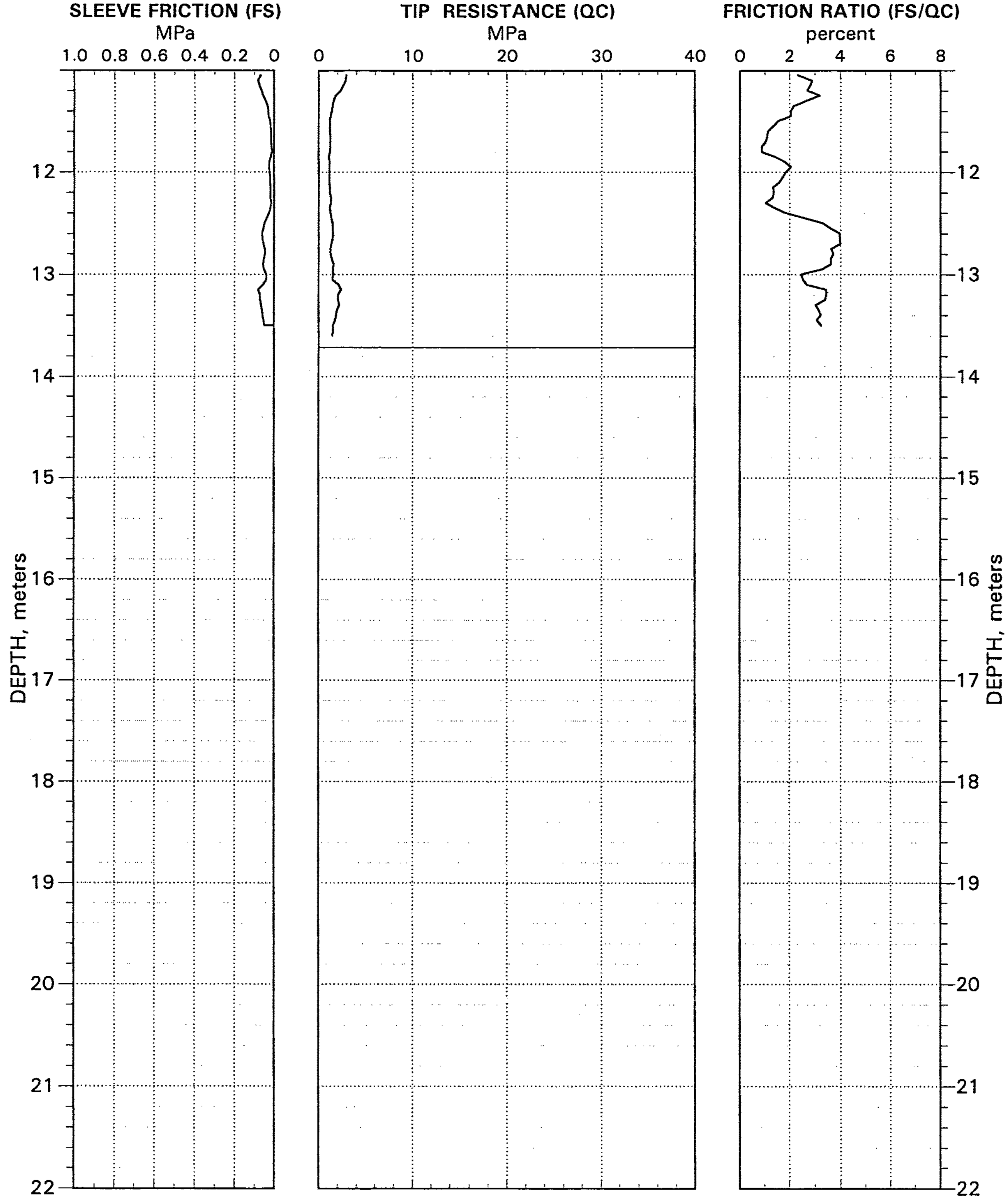
North: 596222
East: 1874576
Date: 4/16/98

Station: 16+992
Offset (m): -27
Surface Elevation: 17.4 meters (approx.)

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT

Project Number: 95-973017NB.00	CONE PENETRATION TEST SOUNDING NUMBER: WC14	Fig.F-55 Page 1 of 2

URS Greiner Woodward Clyde

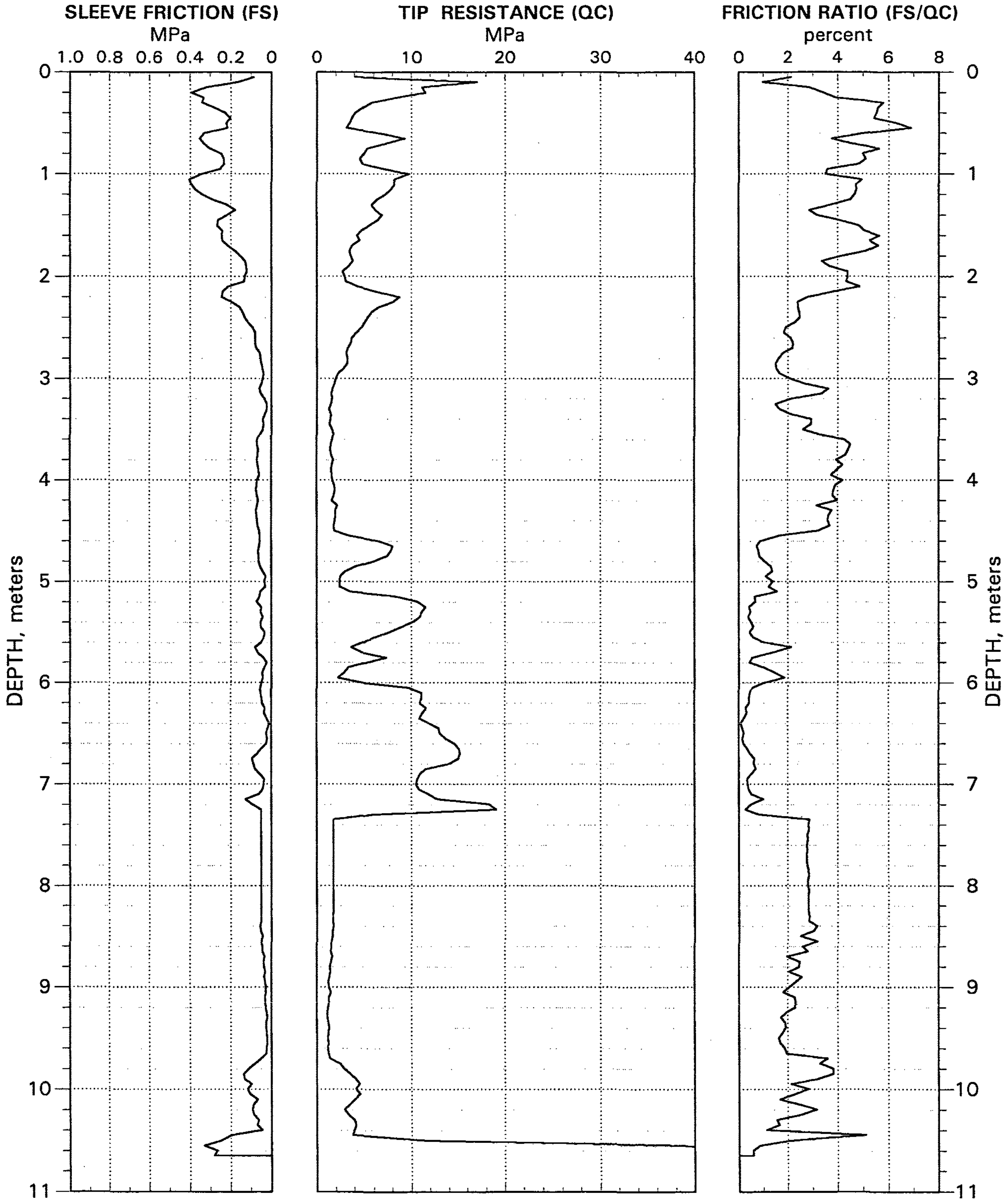


North: 596222
East: 1874576
Date: 4/16/98

Station: 16+992
Offset (m): -27
Surface Elevation: 17.4 meters (approx.)

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT

Project Number: 95-973017NB.00	CONE PENETRATION TEST SOUNDING NUMBER: WC14	Fig.F-55 Page 2 of 2



North: 595717
East: 1874874
Date: 4/16/98

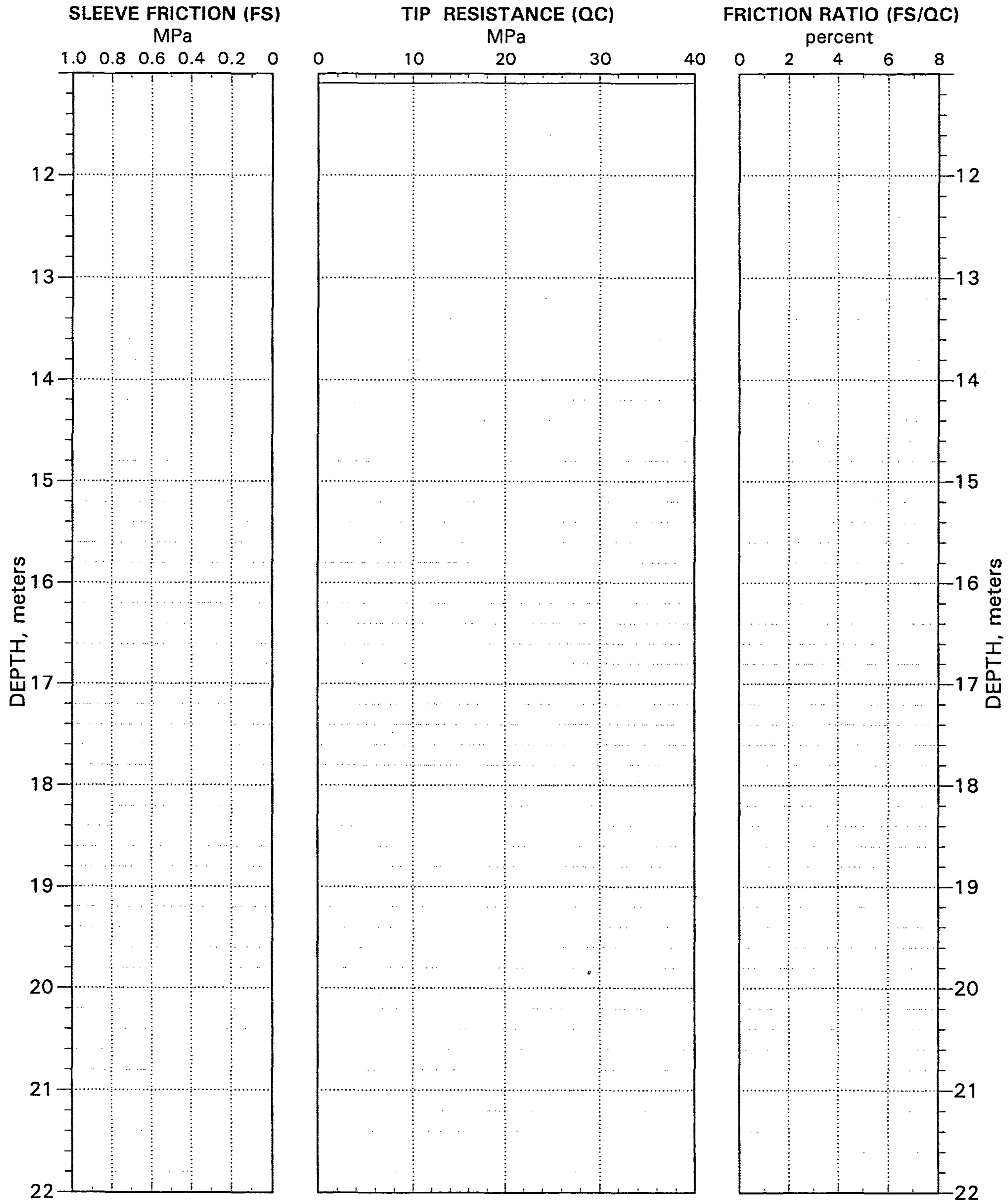
Station: 17+578
Offset (m): -25
Surface Elevation: 18.3 meters (approx.

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT

Project Number: 95-973017NB.00	CONE PENETRATION TEST SOUNDING NUMBER: WC15	Fig.F-56 Page 1 of 2

4/20/00 GUADM_CN GUADM

URS Greiner Woodward Clyde



North: 595717
East: 1874874
Date: 4/16/98

Station: 17+578
Offset (m): -25
Surface Elevation: 18.3 meters (approx.

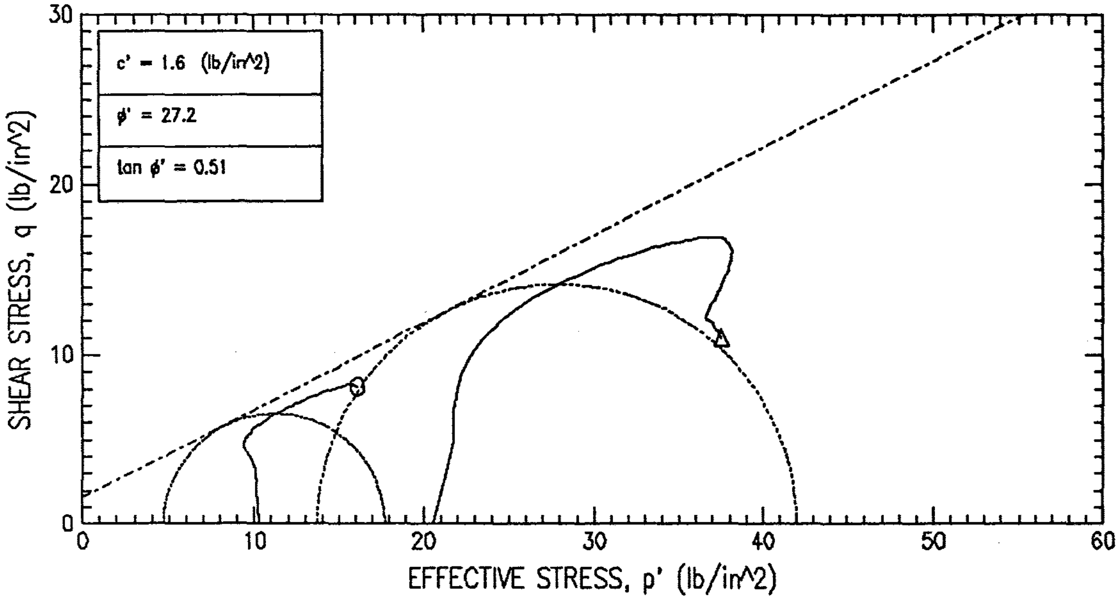
LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT

Project Number: 95-973017NB.00	CONE PENETRATION TEST SOUNDING NUMBER: WC15	Fig.F-56 Page 2 of 2

URS Greiner Woodward Clyde

SECTION 1

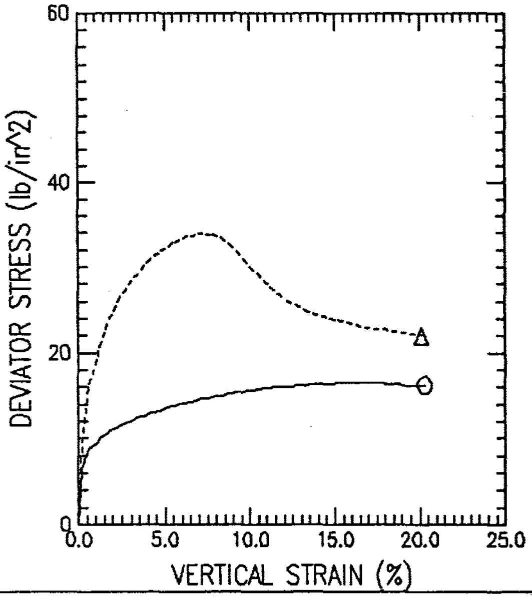
UNDRAINED TRIAXIAL TEST



FAILURE SKETCHES

EB1-6B

EB1-6C



SYMBOL		○	Δ		
TEST NO.		EB1-6B	EB1-6C		
INITIAL	WATER CONTENT (%)	18.51	21.91		
	DRY DENSITY (lb/ft^3)	108.63	106.93		
	SATURATION (%)	87.26	99.05		
	VOID RATIO	0.585	0.611		
BEFORE SHEAR	WATER CONTENT (%)	19.09	21.61		
	DRY DENSITY (lb/ft^3)	112.87	107.90		
	SATURATION (%)	100.18	100.02		
	VOID RATIO	0.526	0.596		
	BACK PRESS. (lb/in^2)	80.00	80.00		
MINOR PRIN. STRESS (lb/in^2)		10.30	20.60		
MAX. DEV. STRESS (lb/in^2)		17.20	34.13		
TIME TO FAILURE (min)		1067.83	487.83		
RATE OF STRAIN INCR (%/min)		0.00	0.00		
INITIAL DIAMETER (in)		2.86	2.86		
INITIAL HEIGHT (in)		5.98	5.98		
B-VALUE		0.98	151.99		

STRAIN CONTROLLED

DESCRIPTION OF SPECIMENS:

1) BROWN TO GRAY BROWN (BOT) GRAVELLY SA-CLAY 2) GRAY BROWN CLAY WITH CALC. NODULES

LL 58.86	PL 22.55	PI 36.31	GS 2.76	TYPE OF SPECIMEN SHELBY	TYPE OF TEST CU (R)

REMARKS:

1) TXCIU TEST WITH EFFECTIVE PRESSURE OF 10.3 PSI

2) TXCIU TEST WITH EFFECTIVE PRESSURE OF 20.6 PSI

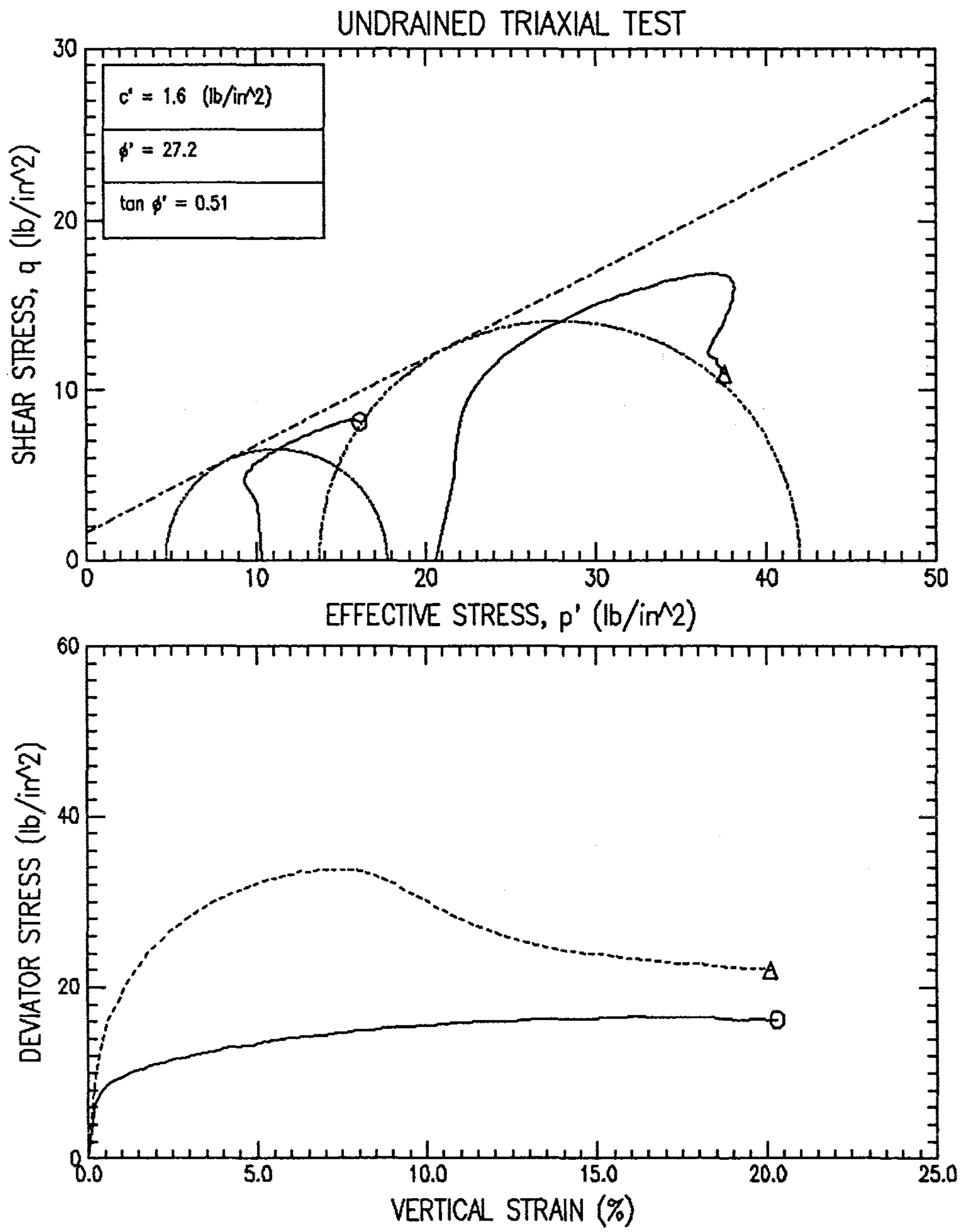
PROJECT LOWER GUADALUPE RIVER

PROJECT NO.973017NB

BORING NO. EB-1	SAMPLE NO.	6B	6C		
TECH. C. WASON	DEPTH/ELEV	9-11.5 FT	9-11.5 FT		
LABORATORY	DATE	08/13/98	08/13/98		

TRIAXIAL COMPRESSION TEST REPORT

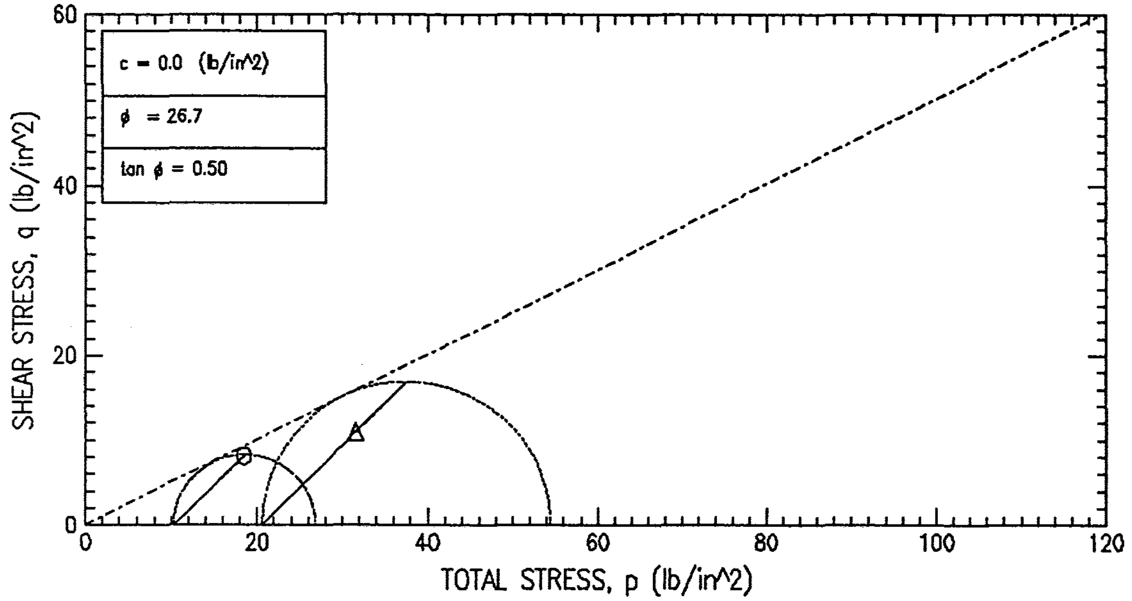
Mon 08-17-98, 11:56:04



Project Name : LOWER GUADALUPE RIVER

Boring No:	Sample No	Depth	Test No	Filename	Symbol
EB-1	6B	9-11.5 FT	EB1-6B	EB1-6B.CIU	O
EB-1	6C	9-11.5 FT	EB1-6C	EB1-6C.CIU	Δ

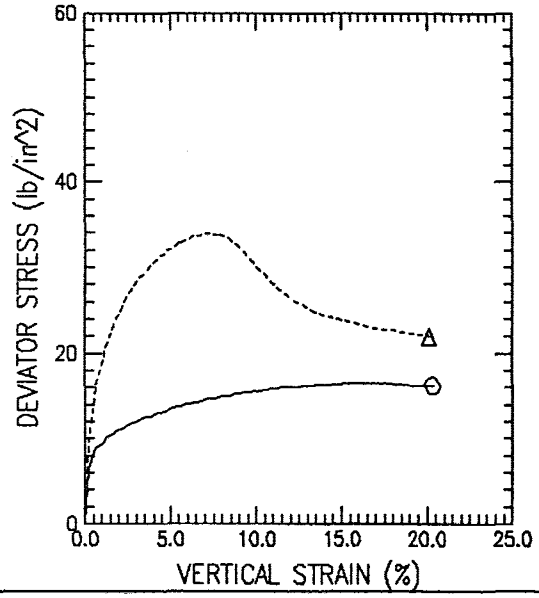
UNDRAINED TRIAXIAL TEST



FAILURE SKETCHES

EB1-6B

EB1-6C



SYMBOL		○	△		
TEST NO.		EB1-6B	EB1-6C		
INITIAL	WATER CONTENT (%)	18.51	21.91		
	DRY DENSITY (lb/ft^3)	108.63	106.93		
	SATURATION (%)	87.26	99.05		
	VOID RATIO	0.585	0.611		
BEFORE SHEAR	WATER CONTENT (%)	19.09	21.61		
	DRY DENSITY (lb/ft^3)	112.87	107.90		
	SATURATION (%)	100.18	100.02		
	VOID RATIO	0.526	0.596		
	BACK PRESS. (lb/in^2)	80.00	80.00		
MINOR PRIN. STRESS (lb/in^2)		10.30	20.60		
MAX. DEV. STRESS (lb/in^2)		17.20	34.13		
TIME TO FAILURE (min)		1067.83	487.83		
RATE OF STRAIN INCR (%/min)		0.00	0.00		
INITIAL DIAMETER (in)		2.86	2.86		
INITIAL HEIGHT (in)		5.98	5.98		
B-VALUE		0.98	151.99		

STRAIN CONTROLLED

DESCRIPTION OF SPECIMENS:

1) BROWN TO GRAY BROWN (BOT) GRAVELLY SA-CLAY 2) GRAY BROWN CLAY WITH CALC. NODULES

LL 58.86	PL 22.55	PI 36.31	GS 2.76	TYPE OF SPECIMEN SHELBY	TYPE OF TEST CU (R)

REMARKS:

1) TXCIU TEST WITH EFFECTIVE PRESSURE OF 10.3 PSI

2) TXCIU TEST WITH EFFECTIVE PRESSURE OF 20.6 PSI

PROJECT LOWER GUADALUPE RIVER

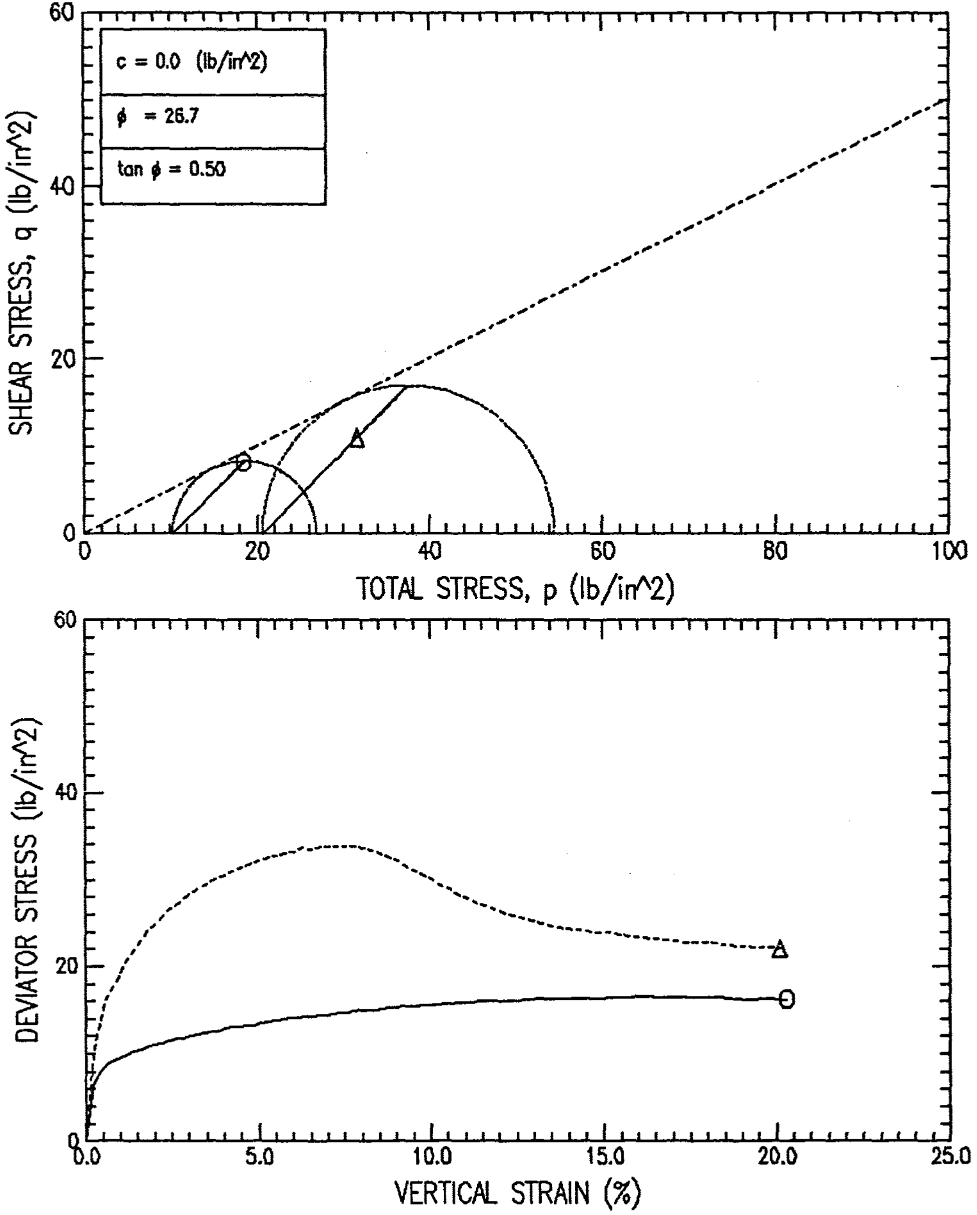
PROJECT NO.973017NB

BORING NO. EB-1	SAMPLE NO.	6B	6C		
TECH. C. WASON	DEPTH/ELEV	9-11.5 FT	9-11.5 FT		
LABORATORY	DATE	08/13/98	08/13/98		

TRIAXIAL COMPRESSION TEST REPORT

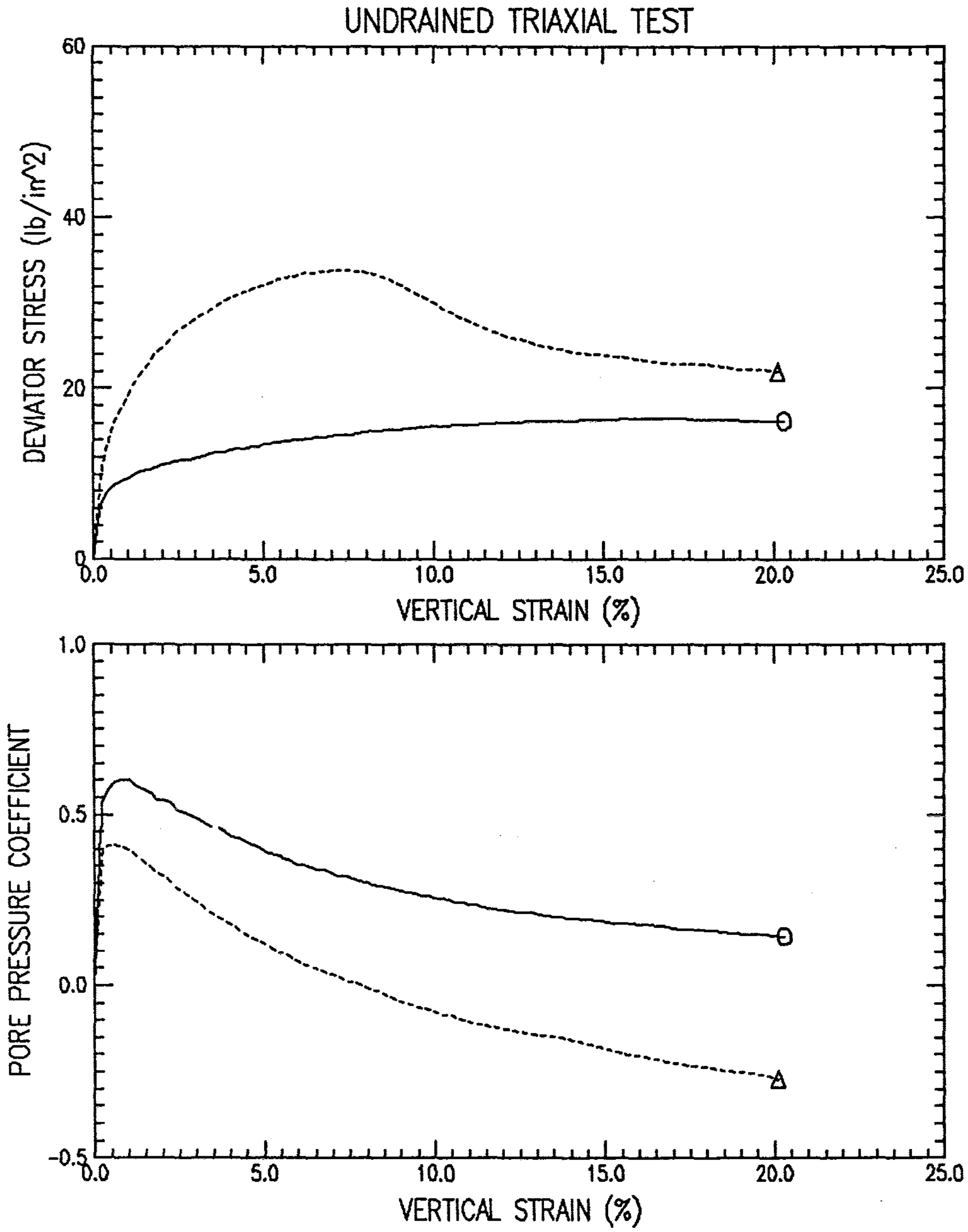
Mon 08-17-98, 11:54:07

UNDRAINED TRIAXIAL TEST



Project Name : LOWER GUADALUPE RIVER

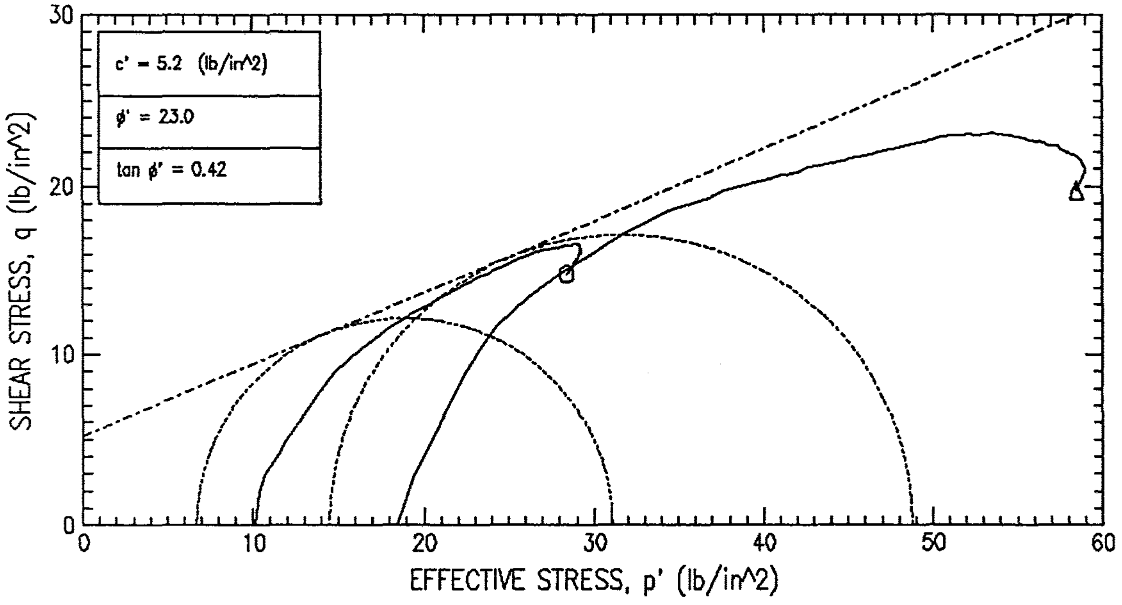
Boring No:	Sample No	Depth	Test No	Filename	Symbol
EB-1	6B	9-11.5 FT	EB1-6B	EB1-6B.CIU	O
EB-1	6C	9-11.5 FT	EB1-6C	EB1-6C.CIU	Δ



Project Name : LOWER GUADALUPE RIVER

Boring No:	Sample No	Depth	Test No	Filename	Symbol
EB-1	6B	9-11.5 FT	EB1-6B	EB1-6B.CIU	O
EB-1	6C	9-11.5 FT	EB1-6C	EB1-6C.CIU	Δ

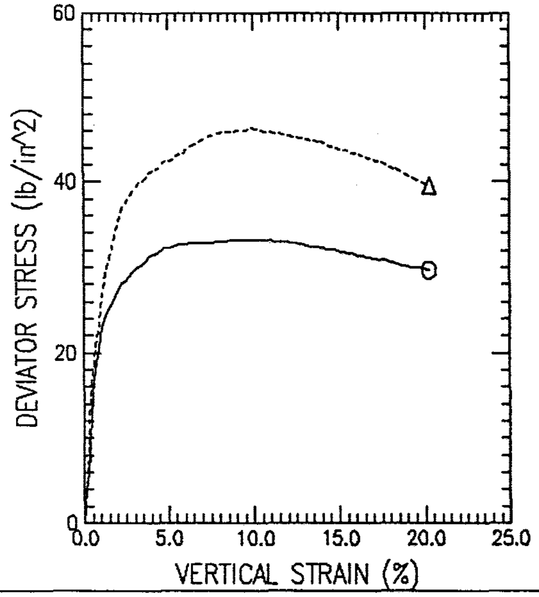
UNDRAINED TRIAXIAL TEST



FAILURE SKETCHES

EB9-6B

EB9-6C



SYMBOL		○	△		
TEST NO.		EB9-6B	EB9-6C		
INITIAL	WATER CONTENT (%)	17.20	18.53		
	DRY DENSITY (lb/ft^3)	108.92	108.96		
	SATURATION (%)	83.78	90.35		
	VOID RATIO	0.558	0.558		
BEFORE SHEAR	WATER CONTENT (%)	19.54	19.40		
	DRY DENSITY (lb/ft^3)	110.87	111.14		
	SATURATION (%)	100.13	100.10		
	VOID RATIO	0.531	0.527		
	BACK PRESS. (lb/in^2)	80.00	80.00		
MINOR PRIN. STRESS (lb/in^2)		10.10	18.40		
MAX. DEV. STRESS (lb/in^2)		33.78	47.22		
TIME TO FAILURE (min)		716.17	749.95		
RATE OF STRAIN INCR (%/min)		0.00	0.00		
INITIAL DIAMETER (in)		2.86	2.86		
INITIAL HEIGHT (in)		5.98	5.98		
B-VALUE		0.99	0.98		

STRAIN CONTROLLED

DESCRIPTION OF SPECIMENS:

1) BROWN SANDY CLAY WITH GRAVEL 2) DARK BROWN SANDY CLAY WITH GRAVEL

LL 35.48	PL 19.69	PI 15.79	GS 2.72	TYPE OF SPECIMEN SHELBY	TYPE OF TEST CU (R)

REMARKS:

1) TXCIU TEST WITH EFFECTIVE PRESSURE OF 10.1 PSI

2) TXCIU TEST WITH EFFECTIVE PRESSURE OF 18.4 PSI

PROJECT LOWER GUADALUPE RIVER

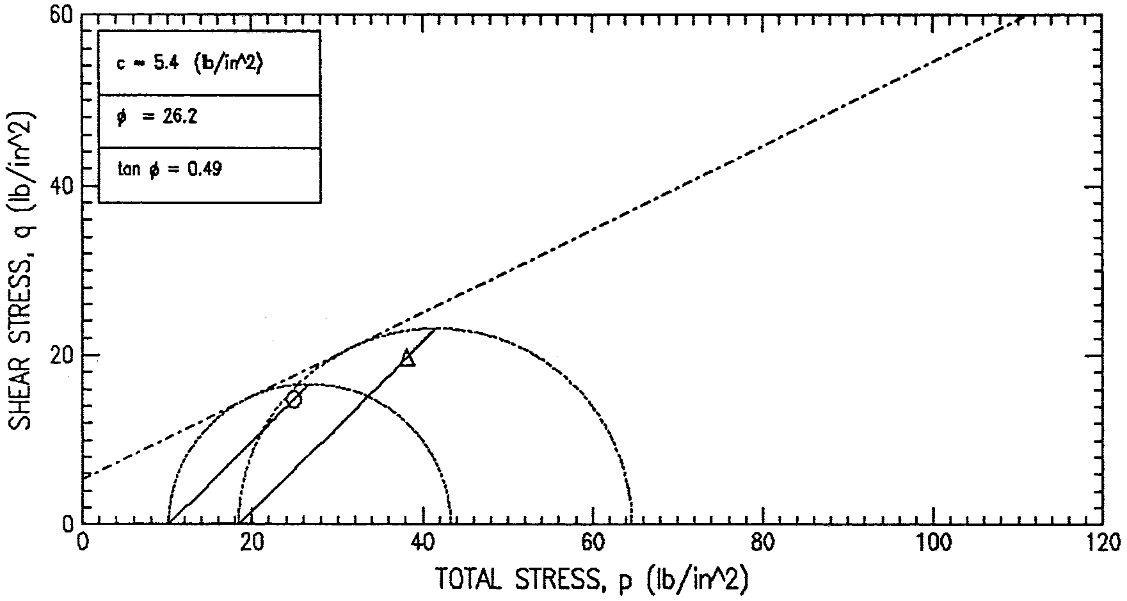
PROJECT NO.973017NB

BORING NO. EB-9	SAMPLE NO.	6B	6C		
TECH. C. CAPPS	DEPTH/ELEV	9-10.5 FT	9-10.5 FT		
LABORATORY	DATE	06/24/98	06/24/98		

TRIAXIAL COMPRESSION TEST REPORT

Tue 06-30-98, 11:54:14

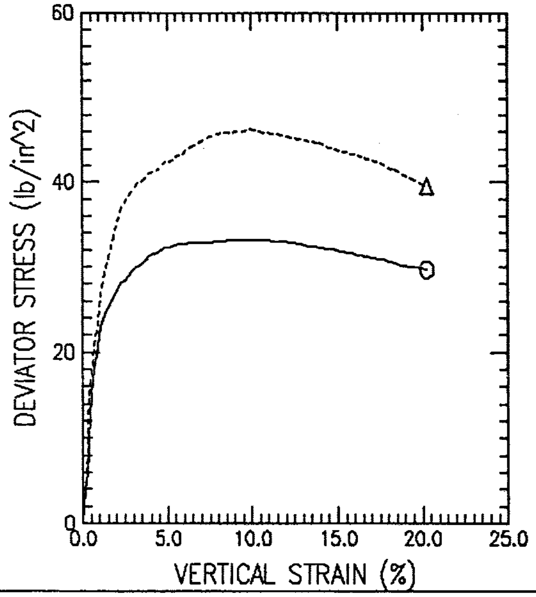
UNDRAINED TRIAXIAL TEST



FAILURE SKETCHES

EB9-6B

EB9-6C



	SYMBOL	○	△		
	TEST NO.	EB9-6B	EB9-6C		
INITIAL	WATER CONTENT (%)	17.20	18.53		
	DRY DENSITY (lb/ft^3)	108.92	108.96		
	SATURATION (%)	83.78	90.35		
	VOID RATIO	0.558	0.558		
BEFORE SHEAR	WATER CONTENT (%)	19.54	19.40		
	DRY DENSITY (lb/ft^3)	110.87	111.14		
	SATURATION (%)	100.13	100.10		
	VOID RATIO	0.531	0.527		
	BACK PRESS. (lb/in^2)	80.00	80.00		
	MINOR PRIN. STRESS (lb/in^2)	10.10	18.40		
	MAX. DEV. STRESS (lb/in^2)	33.78	47.22		
	TIME TO FAILURE (min)	716.17	749.95		
	RATE OF STRAIN INCR (%/min)	0.00	0.00		
	INITIAL DIAMETER (in)	2.86	2.86		
	INITIAL HEIGHT (in)	5.98	5.98		
	B-VALUE	0.99	0.98		

STRAIN CONTROLLED

DESCRIPTION OF SPECIMENS:

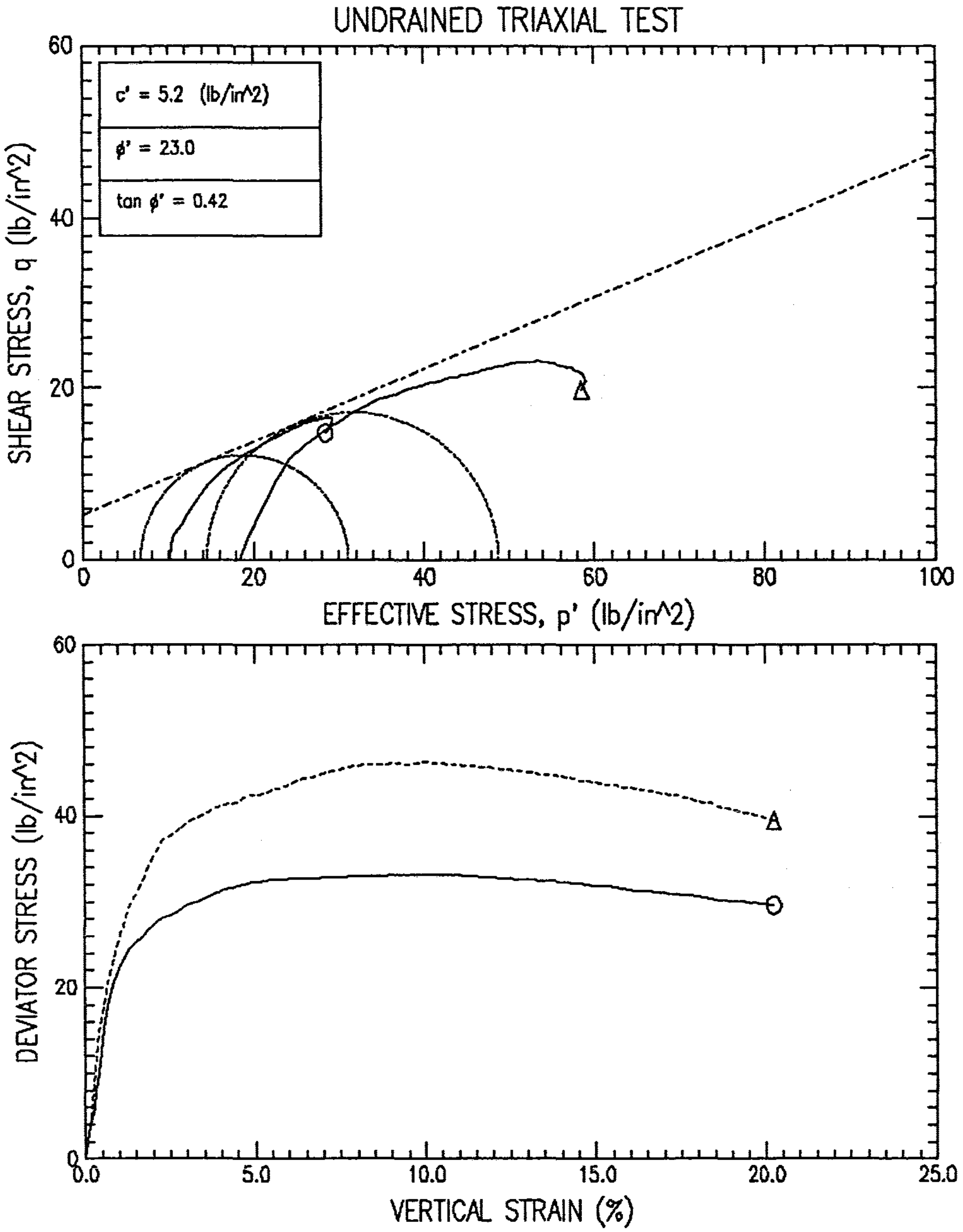
1) BROWN SANDY CLAY WITH GRAVEL

2) DARK BROWN SANDY CLAY WITH GRAVEL

LL 35.48	PL 19.69	PI 15.79	GS 2.72	TYPE OF SPECIMEN SHELBY	TYPE OF TEST CU (R)

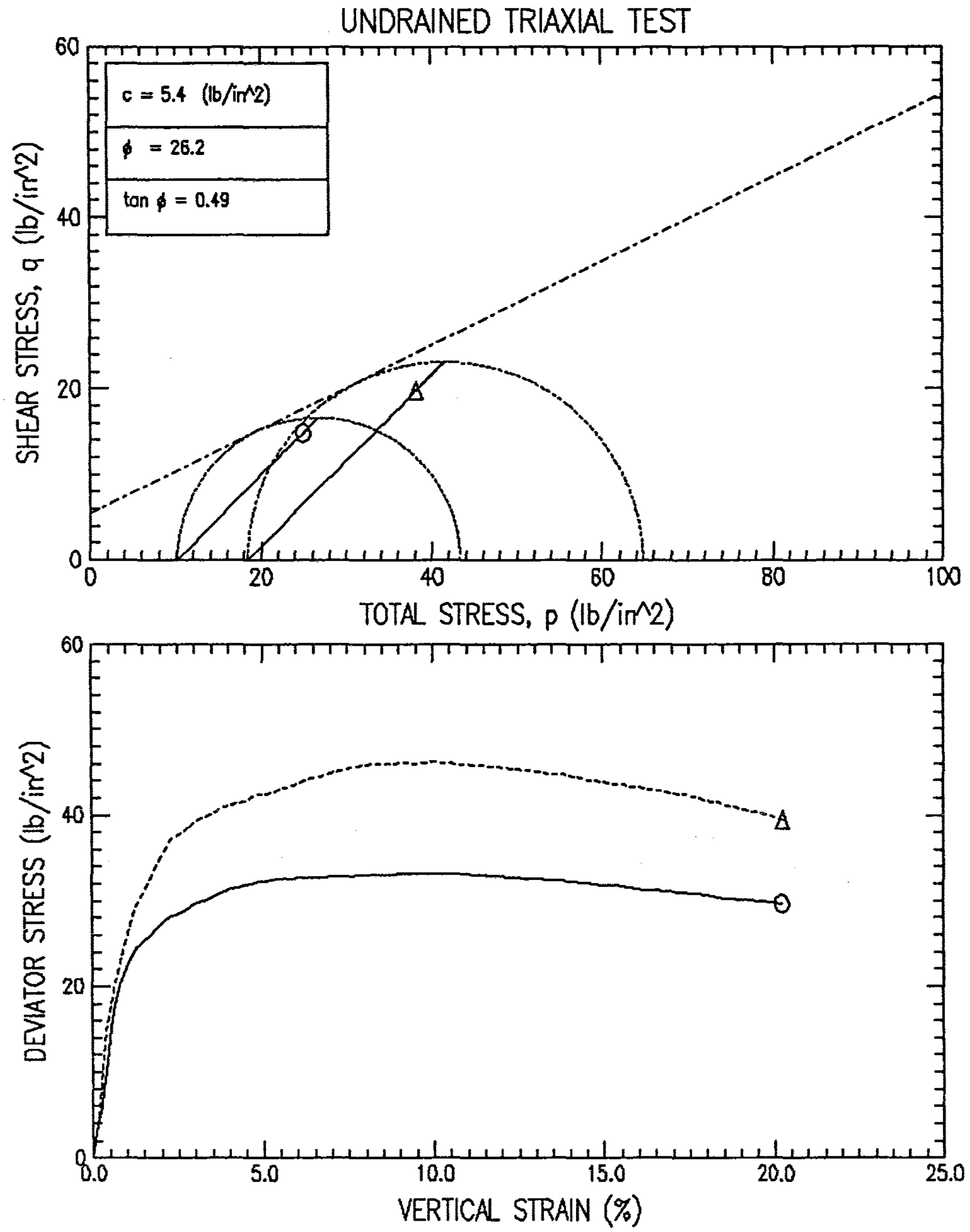
REMARKS:	PROJECT LOWER GUADALUPE RIVER					
1) TXCIU TEST WITH EFFECTIVE PRESSURE OF 10.1 PSI	PROJECT NO.973017NB					
2) TXCIU TEST WITH EFFECTIVE PRESSURE OF 18.4 PSI	BORING NO. EB-9	SAMPLE NO.	6B	6C		
	TECH. C. CAPPS	DEPTH/ELEV	9-10.5 FT	9-10.5 FT		
	LABORATORY	DATE	06/24/98	06/24/98		
	TRIAXIAL COMPRESSION TEST REPORT					

Tue 06-30-98, 11:55:21



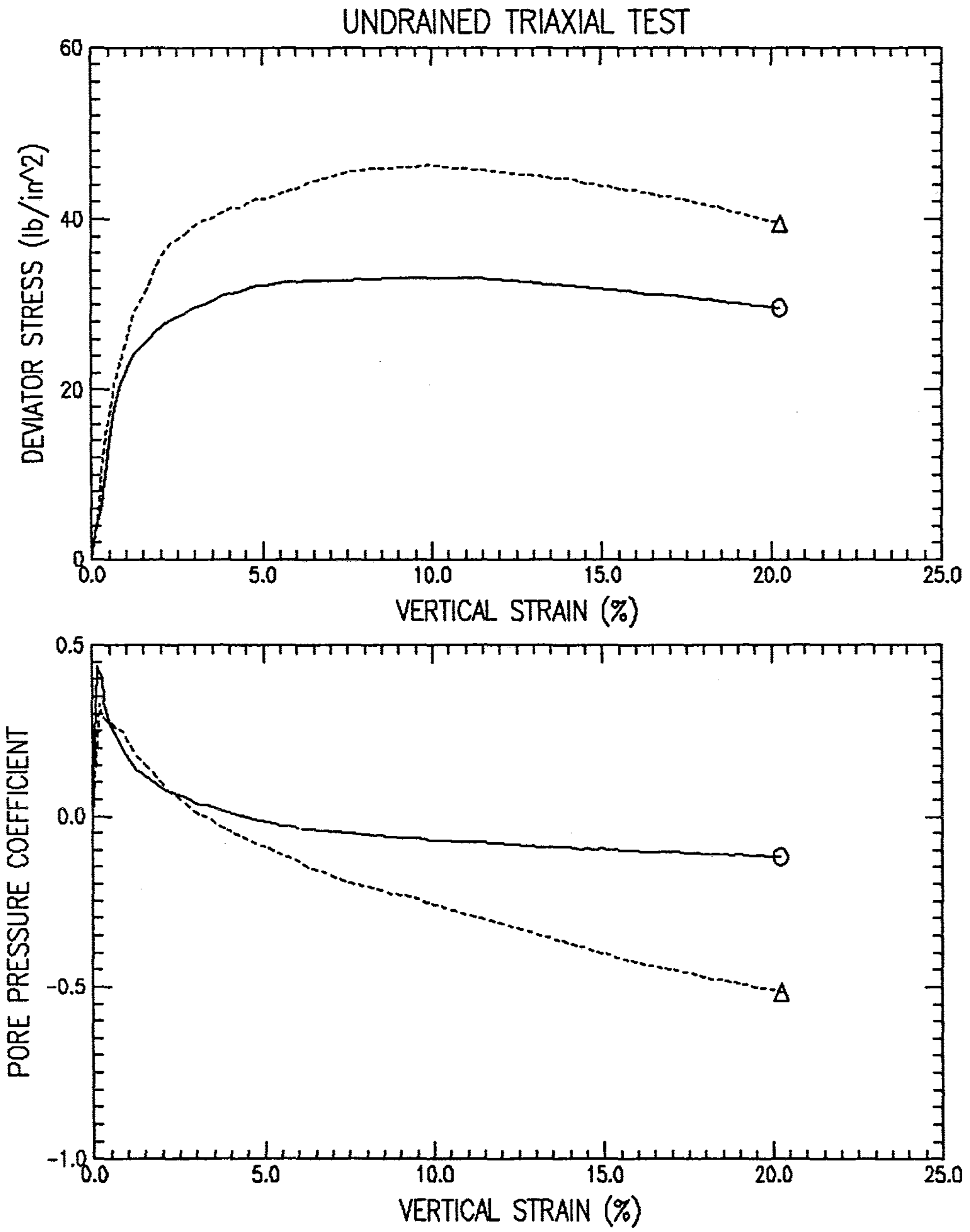
Project Name : LOWER GUADALUPE RIVER

Boring No:	Sample No	Depth	Test No	Filename	Symbol
EB-9	6B	9-10.5 FT	EB9-6B	EB9-6B.CIU	○
EB-9	6C	9-10.5 FT	EB9-6C	EB9-6C.CIU	△



Project Name : LOWER GUADALUPE RIVER

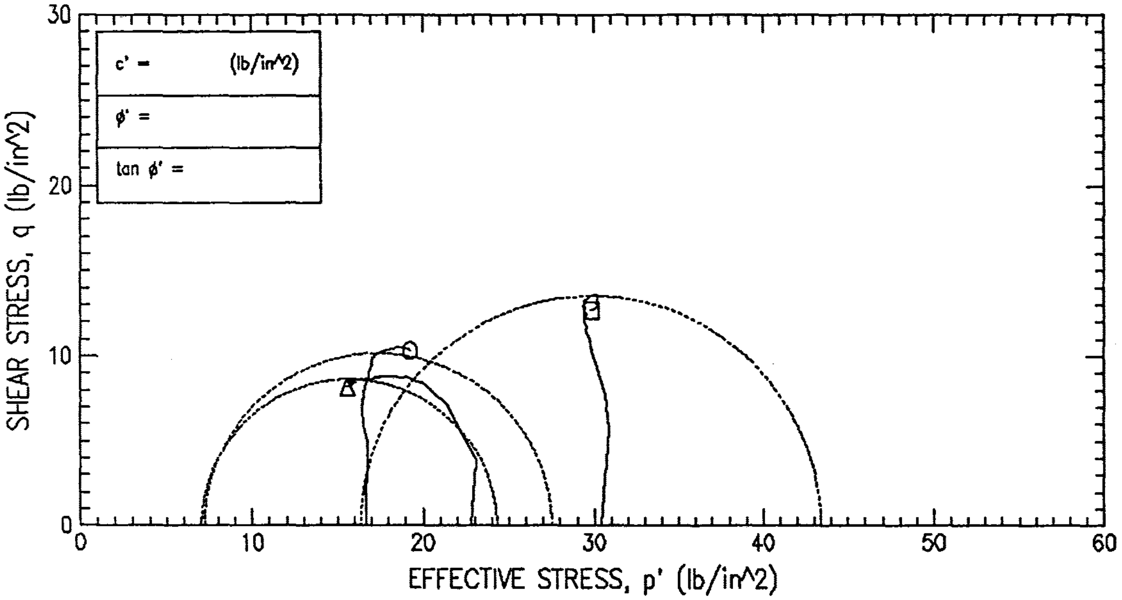
Boring No:	Sample No	Depth	Test No	Filename	Symbol
EB-9	6B	9-10.5 FT	EB9-6B	EB9-6B.CIU	○
EB-9	6C	9-10.5 FT	EB9-6C	EB9-6C.CIU	△



Project Name : LOWER GUADALUPE RIVER

Boring No:	Sample No	Depth	Test No	Filename	Symbol
EB-9	6B	9-10.5 FT	EB9-6B	EB9-6B.CIU	O
EB-9	6C	9-10.5 FT	EB9-6C	EB9-6C.CIU	Δ

UNDRAINED TRIAXIAL TEST

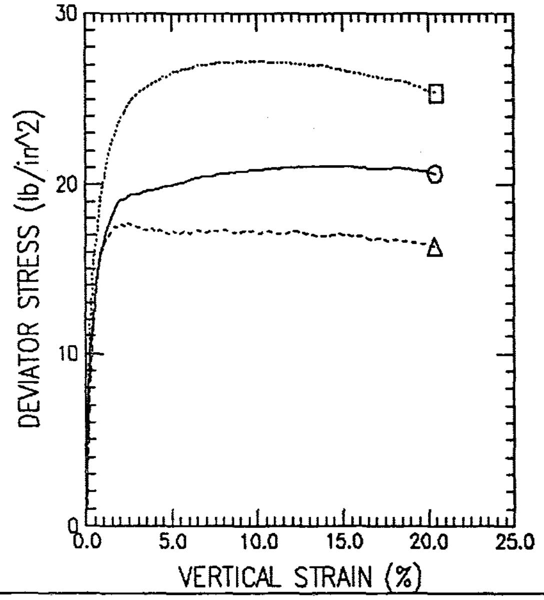


FAILURE SKETCHES

EB9-10A

EB9-10B

EB9-10C



SYMBOL		○	△	□	
TEST NO.		EB9-10A	EB9-10B	EB9-10C	
INITIAL	WATER CONTENT (%)	20.86	26.28	28.24	
	DRY DENSITY (lb/ft^3)	102.04	92.59	94.12	
	SATURATION (%)	85.54	85.78	95.62	
	VOID RATIO	0.663	0.833	0.803	
BEFORE SHEAR	WATER CONTENT (%)	22.67	28.70	25.88	
	DRY DENSITY (lb/ft^3)	105.04	95.36	99.66	
	SATURATION (%)	100.12	100.09	100.12	
	VOID RATIO	0.616	0.780	0.703	
	BACK PRESS. (lb/in^2)	80.00	80.00	80.00	
MINOR PRIN. STRESS (lb/in^2)		16.70	22.80	30.40	
MAX. DEV. STRESS (lb/in^2)		21.68	18.19	28.85	
TIME TO FAILURE (min)		937.87	169.75	583.82	
RATE OF STRAIN INCR (%/min)		0.00	0.00	0.00	
INITIAL DIAMETER (in)		2.86	2.86	2.86	
INITIAL HEIGHT (in)		5.98	5.98	5.98	
B-VALUE		0.98	0.98	0.98	

STRAIN CONTROLLED

DESCRIPTION OF SPECIMENS:

1) BROWN FINE SANDY SILTY CLAY
2) BROWN FINE SA-CLAYEY SILT / SILTY CLAY
3) BROWN FINE SA-SILTY CLAY/ CLAYEY SILT

LL 35.39	PL 21.04	PI 14.35	GS 2.72	TYPE OF SPECIMEN SHELBY	TYPE OF TEST CU (R)

REMARKS:

1) TXCIU TEST WITH EFFECTIVE PRESSURE OF 16.7 PSI
2) TXCIU TEST WITH EFFECTIVE PRESSURE OF 22.8 PSI
3) TXCIU TEST WITH EFFECTIVE PRESSURE OF 30.4 PSI

PROJECT LOWER GUADALUPE RIVER

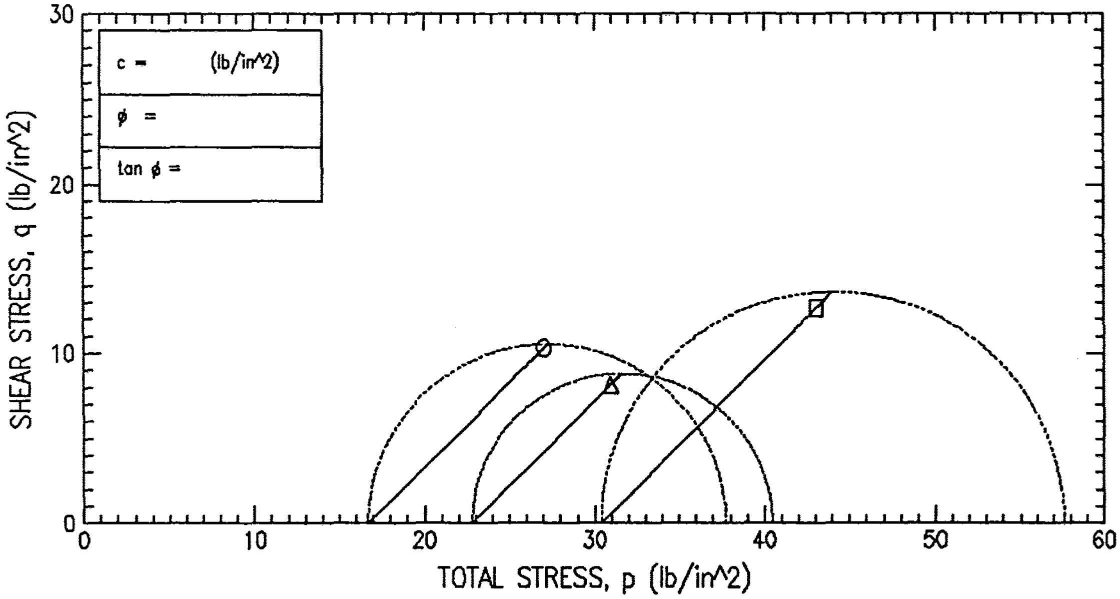
PROJECT NO.973017NB

BORING NO. EB-9	SAMPLE NO.	10A	10B	10C
TECH. C. CAPPS	DEPTH/ELEV	16-18.5 FT	16-18.5 FT	16-18.5 FT
LABORATORY	DATE	07/06/98	07/06/98	07/06/98

TRIAXIAL COMPRESSION TEST REPORT

Wed 07-08-98, 18:48:06

UNDRAINED TRIAXIAL TEST

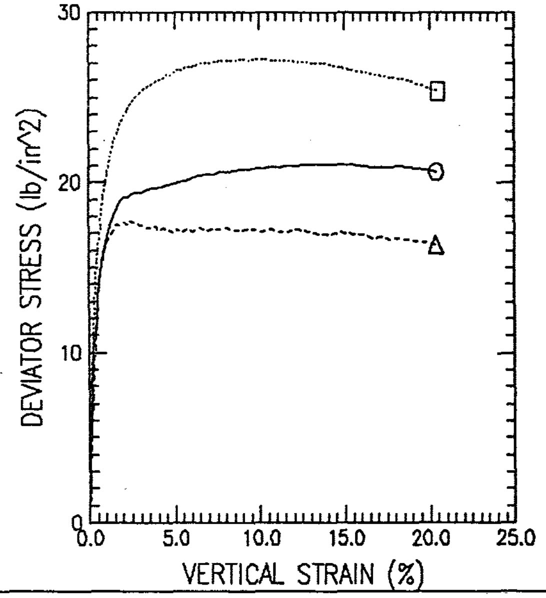


FAILURE SKETCHES

EB9-10A

EB9-10B

EB9-10C



	SYMBOL	○	△	□
	TEST NO.	EB9-10A	EB9-10B	EB9-10C
INITIAL	WATER CONTENT (%)	20.86	26.28	28.24
	DRY DENSITY (lb/ft^3)	102.04	92.59	94.12
	SATURATION (%)	85.54	85.78	95.62
	VOID RATIO	0.663	0.833	0.803
BEFORE SHEAR	WATER CONTENT (%)	22.67	28.70	25.88
	DRY DENSITY (lb/ft^3)	105.04	95.36	99.66
	SATURATION (%)	100.12	100.09	100.12
	VOID RATIO	0.616	0.780	0.703
	BACK PRESS. (lb/in^2)	80.00	80.00	80.00
	MINOR PRIN. STRESS (lb/in^2)	16.70	22.80	30.40
	MAX. DEV. STRESS (lb/in^2)	21.68	18.19	28.85
	TIME TO FAILURE (min)	937.87	169.75	583.82
	RATE OF STRAIN INCR (%/min)	0.00	0.00	0.00
	INITIAL DIAMETER (in)	2.86	2.86	2.86
	INITIAL HEIGHT (in)	5.98	5.98	5.98
	B-VALUE	0.98	0.98	0.98

STRAIN CONTROLLED

DESCRIPTION OF SPECIMENS:

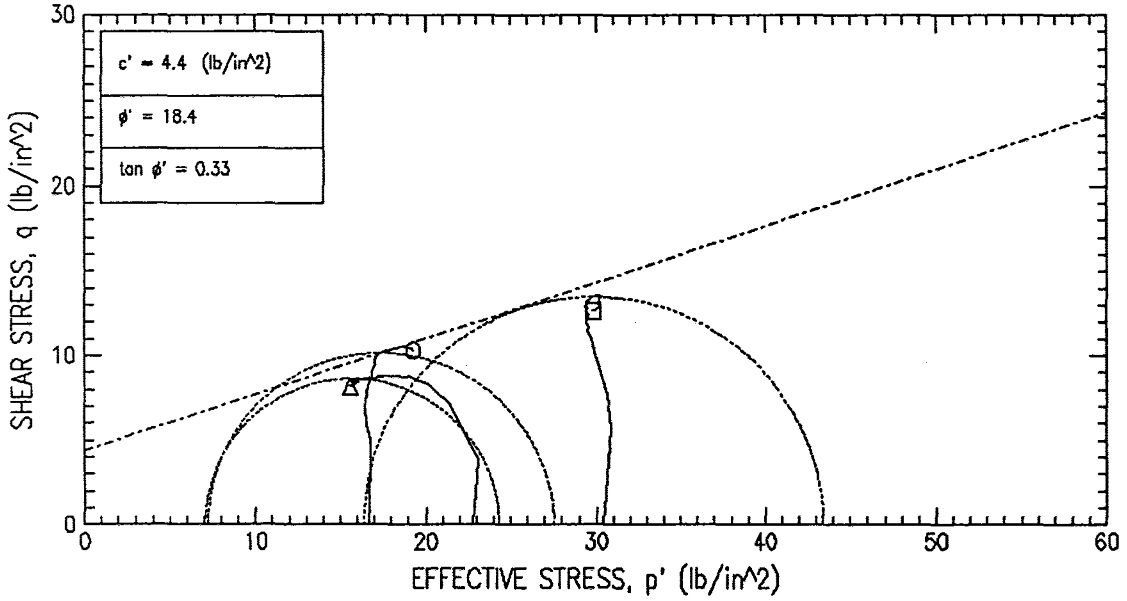
1) BROWN FINE SANDY SILTY CLAY 2) BROWN FINE SA-CLAYEY SILT / SILTY CLAY 3) BROWN FINE SA-SILTY CLAY/ CLAYEY SILT

LL 35.39	PL 21.04	PI 14.35	GS 2.72	TYPE OF SPECIMEN SHELBY	TYPE OF TEST CU (R)

REMARKS:	PROJECT LOWER GUADALUPE RIVER				
1) TXCIU TEST WITH EFFECTIVE PRESSURE OF 16.7 PSI	PROJECT NO.973017NB				
2) TXCIU TEST WITH EFFECTIVE PRESSURE OF 22.8 PSI	BORING NO. EB-9	SAMPLE NO.	10A	10B	10C
3) TXCIU TEST WITH EFFECTIVE PRESSURE OF 30.4 PSI	TECH. C. CAPPS	DEPTH/ELEV	16-18.5 FT	16-18.5 FT	16-18.5 FT
	LABORATORY	DATE	07/06/98	07/06/98	07/06/98
	TRIAXIAL COMPRESSION TEST REPORT				

Wed 07-08-98, 18:53:10

UNDRAINED TRIAXIAL TEST

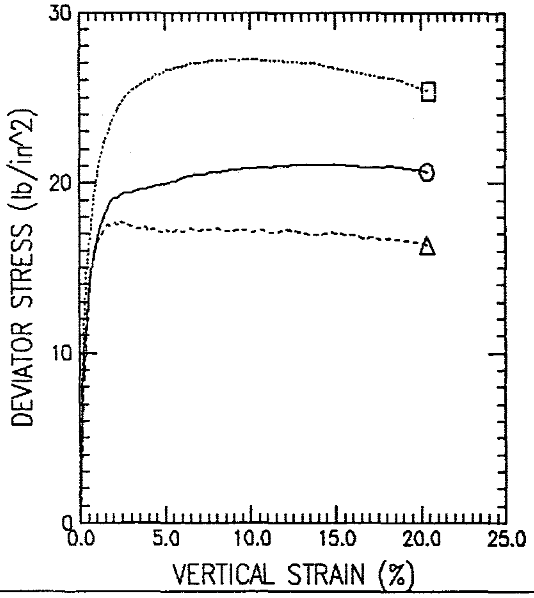


FAILURE SKETCHES

EB9-10A

EB9-10B

EB9-10C



SYMBOL		○	△	□	
TEST NO.		EB9-10A	EB9-10B	EB9-10C	
INITIAL	WATER CONTENT (%)	20.86	26.28	28.24	
	DRY DENSITY (lb/ft^3)	102.04	92.59	94.12	
	SATURATION (%)	85.54	85.78	95.62	
	VOID RATIO	0.663	0.833	0.803	
BEFORE SHEAR	WATER CONTENT (%)	22.67	28.70	25.88	
	DRY DENSITY (lb/ft^3)	105.04	95.36	99.66	
	SATURATION (%)	100.12	100.09	100.12	
	VOID RATIO	0.616	0.780	0.703	
	BACK PRESS. (lb/in^2)	80.00	80.00	80.00	
MINOR PRIN. STRESS (lb/in^2)		16.70	22.80	30.40	
MAX. DEV. STRESS (lb/in^2)		21.68	18.19	28.85	
TIME TO FAILURE (min)		937.87	169.75	583.82	
RATE OF STRAIN INCR (%/min)		0.00	0.00	0.00	
INITIAL DIAMETER (in)		2.86	2.86	2.86	
INITIAL HEIGHT (in)		5.98	5.98	5.98	
B-VALUE		0.98	0.98	0.98	

STRAIN CONTROLLED

DESCRIPTION OF SPECIMENS:

1) BROWN FINE SANDY SILTY CLAY   2) BROWN FINE SA-CLAYEY SILT / SILTY CLAY   3) BROWN FINE SA-SILTY CLAY/ CLAYEY SILT

LL 35.39	PL 21.04	PI 14.35	GS 2.72	TYPE OF SPECIMEN SHELBY	TYPE OF TEST CU (R)

REMARKS:

1) TXCIU TEST WITH EFFECTIVE PRESSURE OF 16.7 PSI

2) TXCIU TEST WITH EFFECTIVE PRESSURE OF 22.8 PSI

3) TXCIU TEST WITH EFFECTIVE PRESSURE OF 30.4 PSI

PROJECT LOWER GUADALUPE RIVER

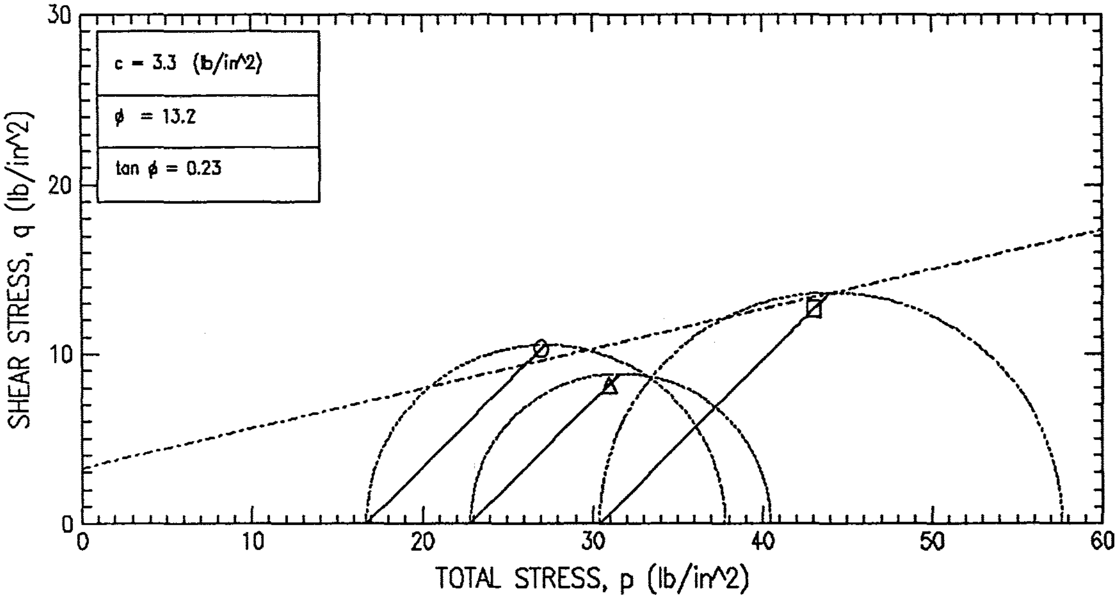
PROJECT NO.973017NB

BORING NO. EB-9	SAMPLE NO.	10A	10B	10C
TECH. C. CAPPS	DEPTH/ELEV	16-18.5 FT	16-18.5 FT	16-18.5 FT
LABORATORY	DATE	07/06/98	07/06/98	07/06/98

TRIAXIAL COMPRESSION TEST REPORT

Wed 07-08-98, 12:16:57

UNDRAINED TRIAXIAL TEST

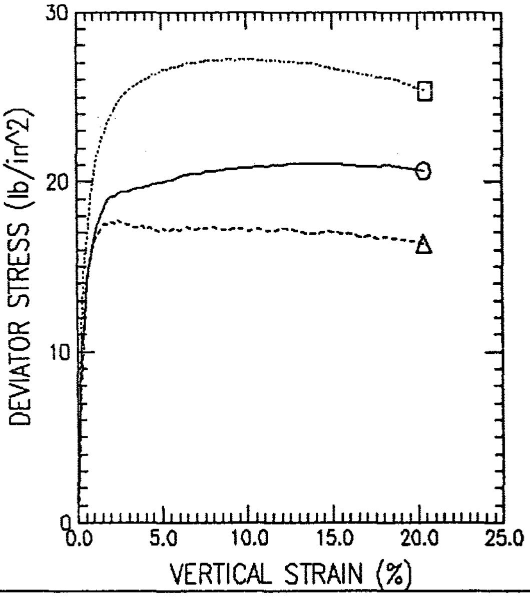


FAILURE SKETCHES

EB9-10A

EB9-10B

EB9-10C



	SYMBOL	○	△	□	
	TEST NO.	EB9-10A	EB9-10B	EB9-10C	
INITIAL	WATER CONTENT (%)	20.86	26.28	28.24	
	DRY DENSITY (lb/ft^3)	102.04	92.59	94.12	
	SATURATION (%)	85.54	85.78	95.62	
	VOID RATIO	0.663	0.833	0.803	
BEFORE SHEAR	WATER CONTENT (%)	22.67	28.70	25.88	
	DRY DENSITY (lb/ft^3)	105.04	95.36	99.66	
	SATURATION (%)	100.12	100.09	100.12	
	VOID RATIO	0.616	0.780	0.703	
	BACK PRESS. (lb/in^2)	80.00	80.00	80.00	
MINOR PRIN. STRESS (lb/in^2)		16.70	22.80	30.40	
MAX. DEV. STRESS (lb/in^2)		21.68	18.19	28.85	
TIME TO FAILURE (min)		937.87	169.75	583.82	
RATE OF STRAIN INCR (%/min)		0.00	0.00	0.00	
INITIAL DIAMETER (in)		2.86	2.86	2.86	
INITIAL HEIGHT (in)		5.98	5.98	5.98	
B-VALUE		0.98	0.98	0.98	

STRAIN CONTROLLED

DESCRIPTION OF SPECIMENS:

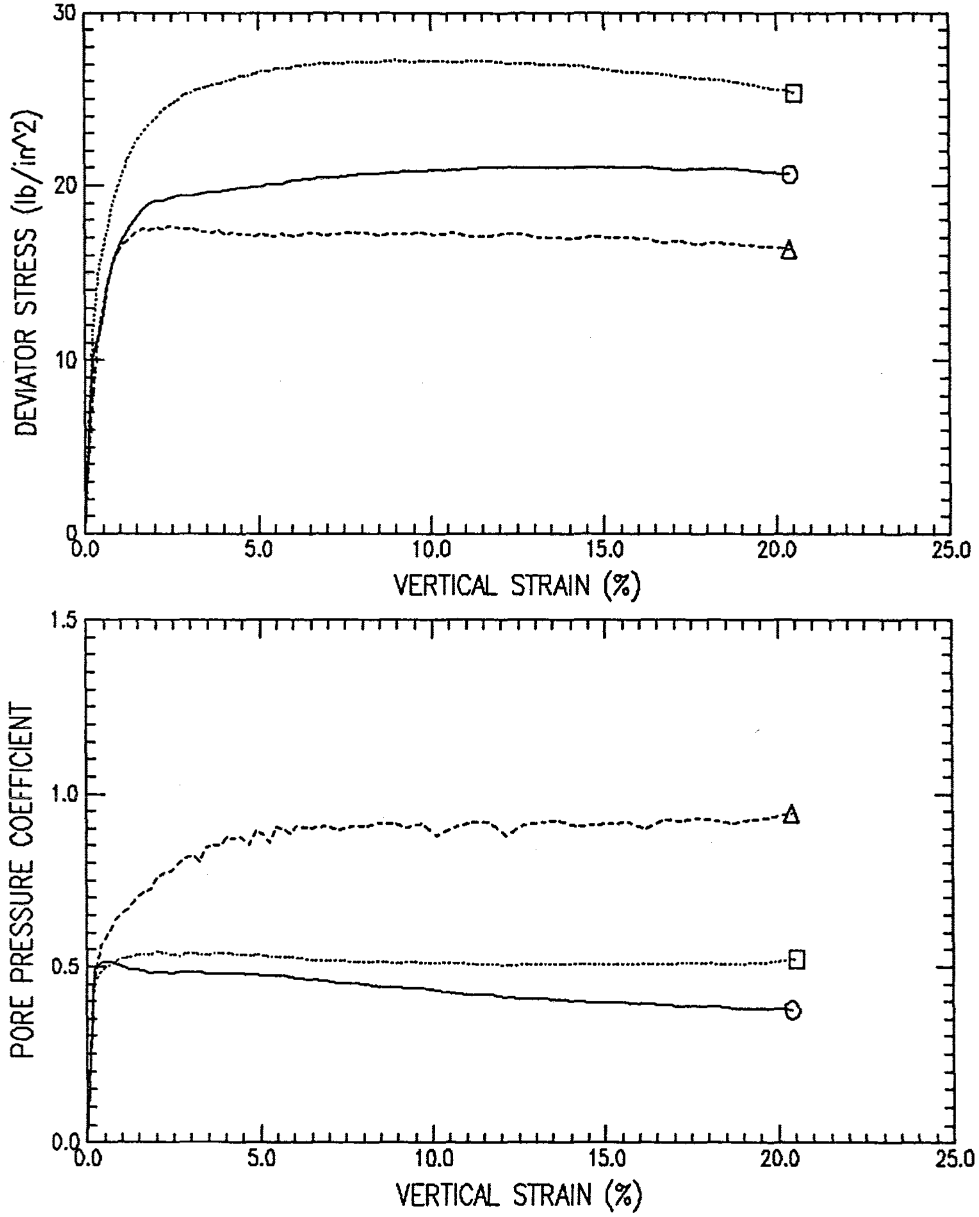
1) BROWN FINE SANDY SILTY CLAY 2) BROWN FINE SA-CLAYEY SILT / SILTY CLAY 3) BROWN FINE SA-SILTY CLAY/ CLAYEY SILT

LL 35.39	PL 21.04	PI 14.35	GS 2.72	TYPE OF SPECIMEN SHELBY	TYPE OF TEST CU (R)

REMARKS:	PROJECT LOWER GUADALUPE RIVER				
1) TXCIU TEST WITH EFFECTIVE PRESSURE OF 16.7 PSI	PROJECT NO.973017NB				
2) TXCIU TEST WITH EFFECTIVE PRESSURE OF 22.8 PSI	BORING NO. EB-9	SAMPLE NO.	10A	10B	10C
3) TXCIU TEST WITH EFFECTIVE PRESSURE OF 30.4 PSI	TECH. C. CAPPS	DEPTH/ELEV	16-18.5 FT	16-18.5 FT	16-18.5 FT
	LABORATORY	DATE	07/06/98	07/06/98	07/06/98
	TRIAXIAL COMPRESSION TEST REPORT				

Wed 07-08-98, 12:18:12

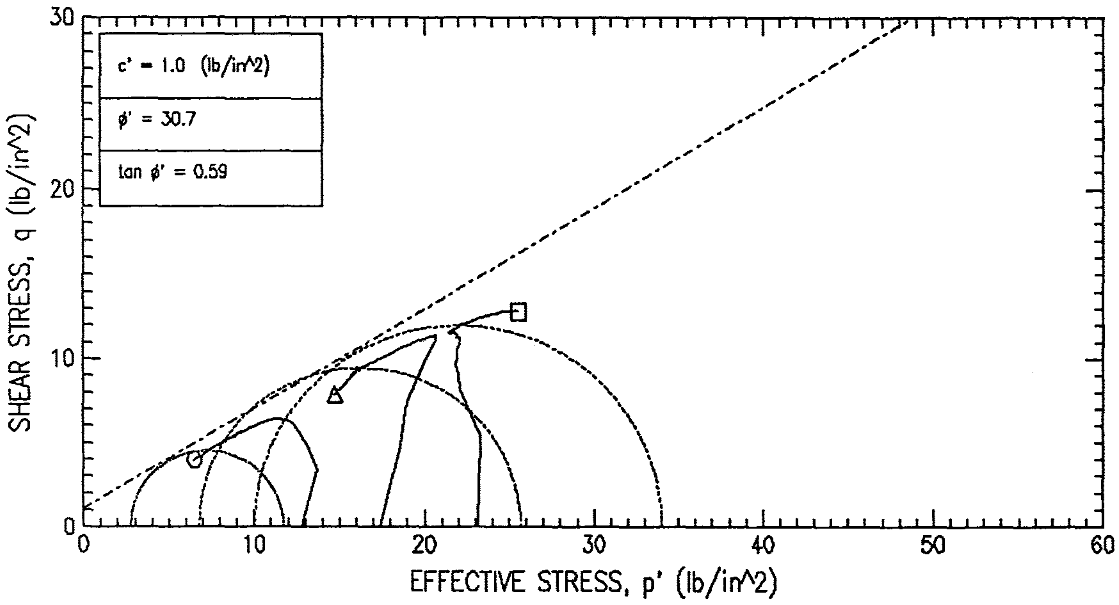
UNDRAINED TRIAXIAL TEST



Project Name : LOWER GUADALUPE RIVER

Boring No:	Sample No	Depth	Test No	Filename	Symbol
EB-9	10A	16-18.5 FT	EB9-10A	EB9-10A.CIU	○
EB-9	10B	16-18.5 FT	EB9-10B	EB9-10B.CIU	△
EB-9	10C	16-18.5 FT	EB9-10C	EB9-10C.CIU	□

UNDRAINED TRIAXIAL TEST

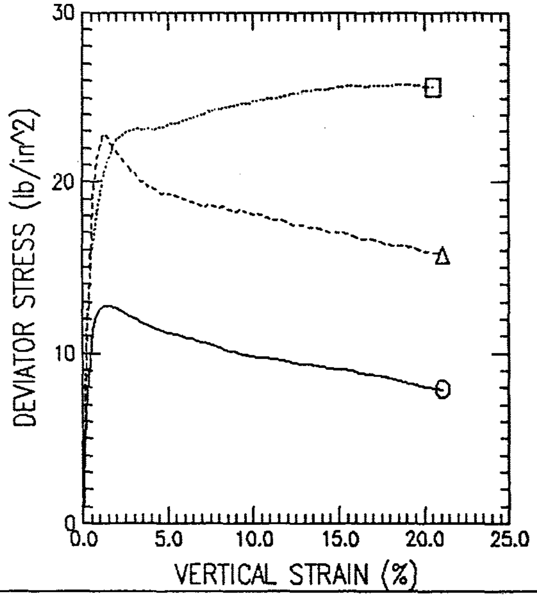


FAILURE SKETCHES

EB11-8A

EB11-8B

EB11-8C



	SYMBOL	○	△	□	
	TEST NO.	EB11-8A	EB11-8B	EB11-8C	
INITIAL	WATER CONTENT (%)	16.84	16.99	17.81	
	DRY DENSITY (lb/ft^3)	84.93	98.16	105.78	
	SATURATION (%)	48.10	65.41	78.71	
	VOID RATIO	0.910	0.691	0.622	
BEFORE SHEAR	WATER CONTENT (%)	33.53	24.81	20.39	
	DRY DENSITY (lb/ft^3)	86.72	100.05	110.00	
	SATURATION (%)	100.09	100.12	100.10	
	VOID RATIO	0.871	0.659	0.560	
	BACK PRESS. (lb/in^2)	80.00	80.00	80.00	
	MINOR PRIN. STRESS (lb/in^2)	12.80	17.40	23.20	
	MAX. DEV. STRESS (lb/in^2)	13.05	23.23	26.81	
	TIME TO FAILURE (min)	96.83	79.50	1350.68	
	RATE OF STRAIN INCR (%/min)	0.00	0.00	0.00	
	INITIAL DIAMETER (in)	2.86	2.86	2.86	
	INITIAL HEIGHT (in)	5.98	5.98	5.98	
	B-VALUE	0.98	0.98	0.98	

STRAIN CONTROLLED

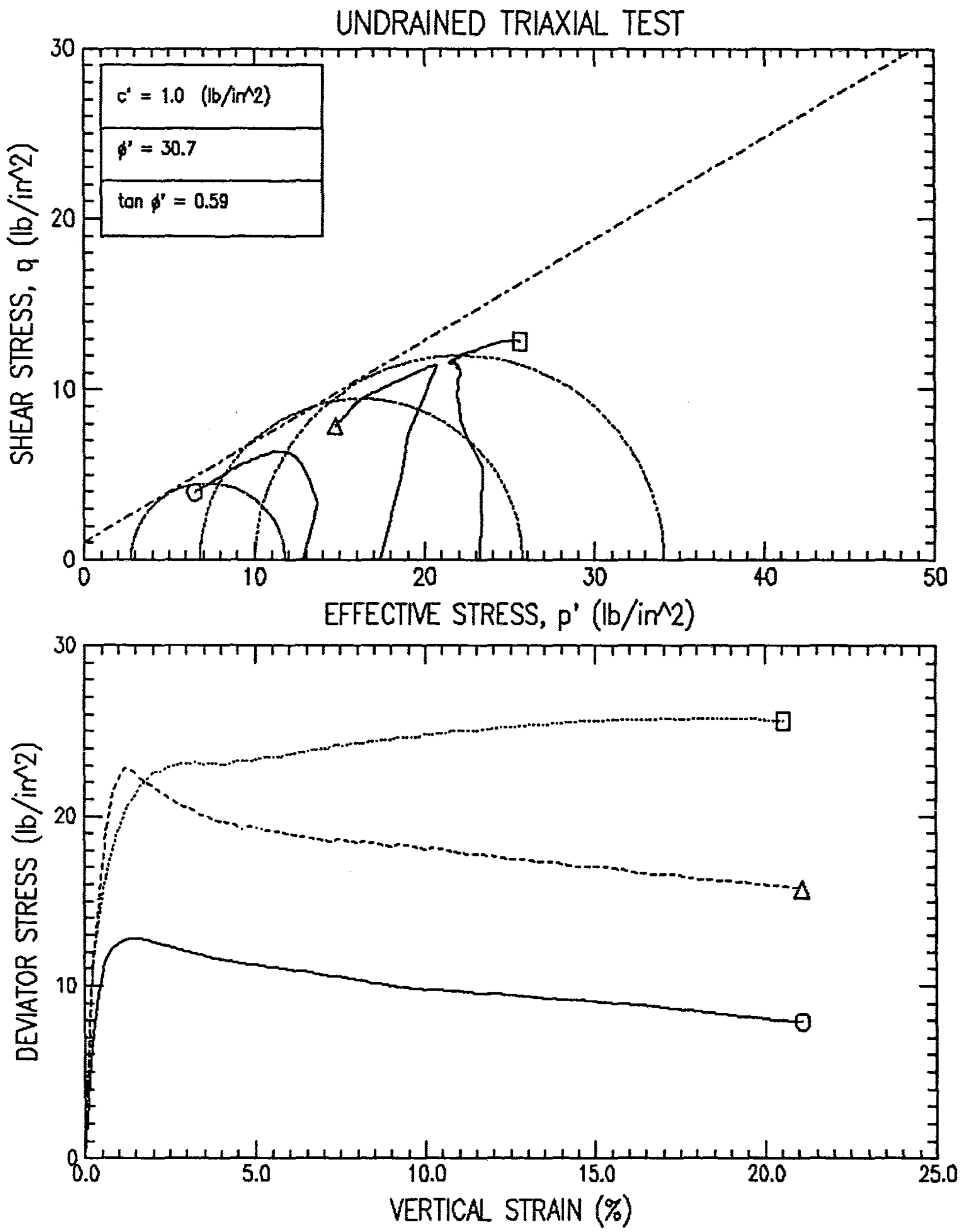
DESCRIPTION OF SPECIMENS:

1) BROWN SILTY SAND 2) BROWN SANDY SILTY CLAY TO CLAYEY SILT 3) BROWN SANDY SILTY CLAY TO CLAYEY SILT

LL 22.86	PL 22.10	PI 0.76	GS 2.60	TYPE OF SPECIMEN SHELBY		TYPE OF TEST CU (R)	

REMARKS:	PROJECT LOWER GUADALUPE RIVER					
1) TXCIU TEST WITH EFFECTIVE PRESSURE OF 12.8 PSI	PROJECT NO.973017NB					
2) TXCIU TEST WITH EFFECTIVE PRESSURE OF 17.4 PSI	BORING NO. EB-11	SAMPLE NO.	8A	8B	8C	
3) TXCIU TEST WITH EFFECTIVE PRESSURE OF 23.2 PSI	TECH. C. CAPPS	DEPTH/ELEV	12-14.5 FT	12-14.5 FT	12-14.5 FT	
	LABORATORY	DATE	07/13/98	07/13/98	07/13/98	
	TRIAXIAL COMPRESSION TEST REPORT					

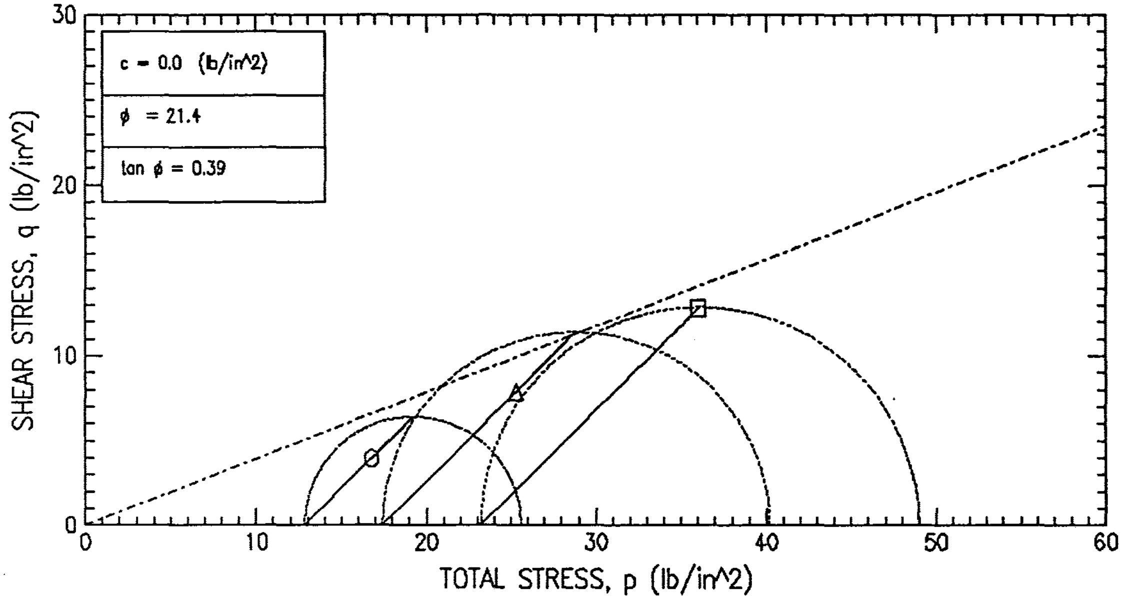
Wed 07-15-98, 14:27:08



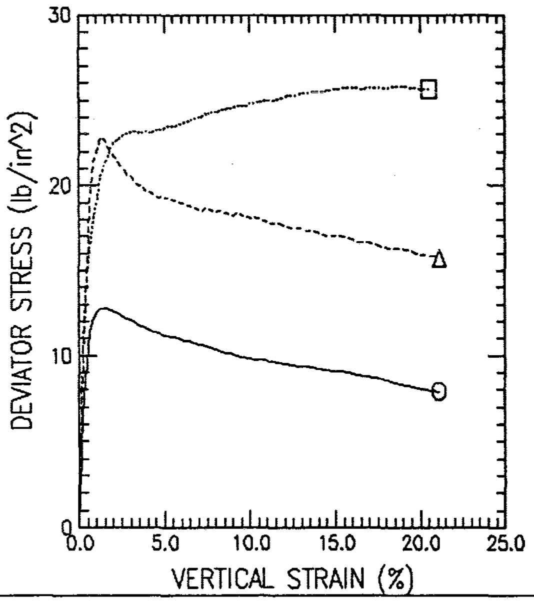
Project Name : LOWER GUADALUPE RIVER

Boring No:	Sample No	Depth	Test No	Filename	Symbol
EB-11	8A	12-14.5 FT	EB11-8A	EB11-8A.CIU	○
EB-11	8B	12-14.5 FT	EB11-8B	EB11-8B.CIU	△
EB-11	8C	12-14.5 FT	EB11-8C	EB11-8C.CIU	□

UNDRAINED TRIAXIAL TEST



FAILURE SKETCHES



	SYMBOL	○	△	□	
	TEST NO.	EB11-8A	EB11-8B	EB11-8C	
INITIAL	WATER CONTENT (%)	16.84	16.99	17.81	
	DRY DENSITY (lb/ft^3)	84.93	98.16	105.78	
	SATURATION (%)	48.10	65.41	78.71	
	VOID RATIO	0.910	0.691	0.622	
BEFORE SHEAR	WATER CONTENT (%)	33.53	24.81	20.39	
	DRY DENSITY (lb/ft^3)	86.72	100.05	110.00	
	SATURATION (%)	100.09	100.12	100.10	
	VOID RATIO	0.871	0.659	0.560	
	BACK PRESS. (lb/in^2)	80.00	80.00	80.00	
	MINOR PRIN. STRESS (lb/in^2)	12.80	17.40	23.20	
	MAX. DEV. STRESS (lb/in^2)	13.05	23.23	26.81	
	TIME TO FAILURE (min)	96.83	79.50	1350.68	
	RATE OF STRAIN INCR (%/min)	0.00	0.00	0.00	
	INITIAL DIAMETER (in)	2.86	2.86	2.86	
	INITIAL HEIGHT (in)	5.98	5.98	5.98	
	B-VALUE	0.98	0.98	0.98	

STRAIN CONTROLLED

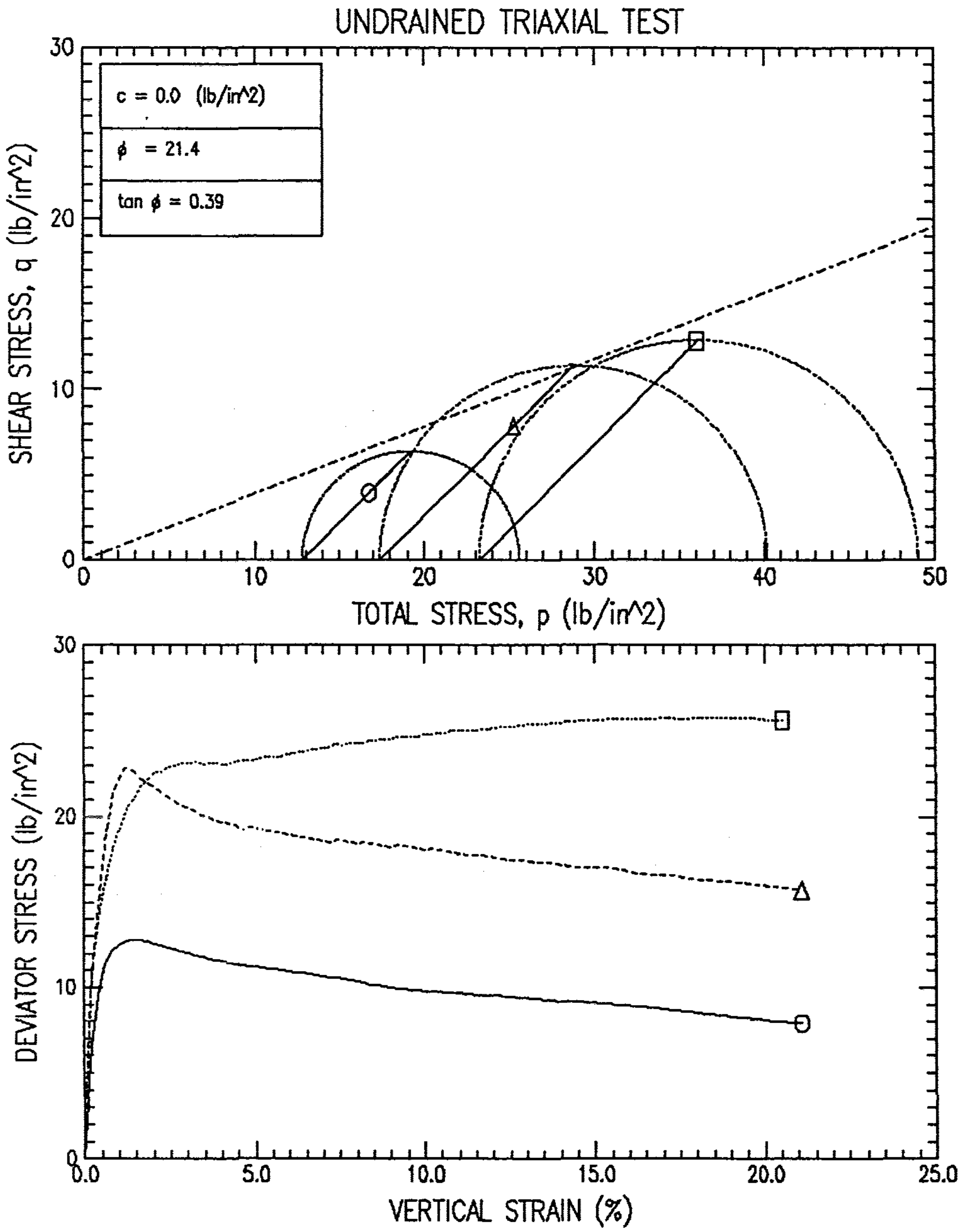
DESCRIPTION OF SPECIMENS:

1) BROWN SILTY SAND 2) BROWN SANDY SILTY CLAY TO CLAYEY SILT 3) BROWN SANDY SILTY CLAY TO CLAYEY SILT

LL 22.86	PL 22.10	PI 0.76	GS 2.60	TYPE OF SPECIMEN SHELBY	TYPE OF TEST CU (R)

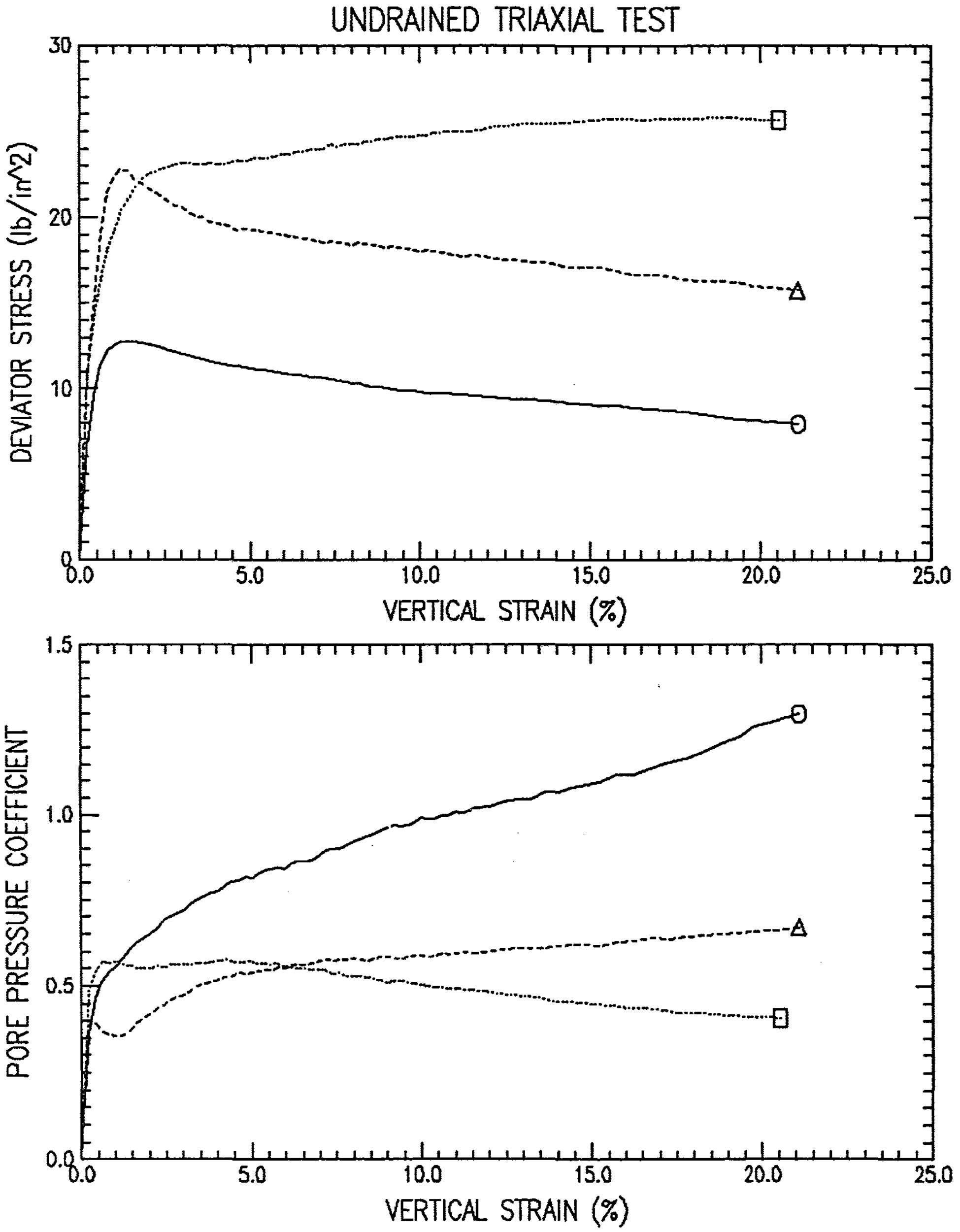
REMARKS:	PROJECT LOWER GUADALUPE RIVER				
1) TXCIU TEST WITH EFFECTIVE PRESSURE OF 12.8 PSI	PROJECT NO.973017NB				
2) TXCIU TEST WITH EFFECTIVE PRESSURE OF 17.4 PSI	BORING NO. EB-11	SAMPLE NO.	8A	8B	8C
3) TXCIU TEST WITH EFFECTIVE PRESSURE OF 23.2 PSI	TECH. C. CAPPS	DEPTH/ELEV	12-14.5 FT	12-14.5 FT	12-14.5 FT
	LABORATORY	DATE	07/13/98	07/13/98	07/13/98
	TRIAXIAL COMPRESSION TEST REPORT				

Wed 07-15-98, 14:28:54



Project Name : LOWER GUADALUPE RIVER

Boring No:	Sample No	Depth	Test No	Filename	Symbol
EB-11	8A	12-14.5 FT	EB11-8A	EB11-8A.CIU	○
EB-11	8B	12-14.5 FT	EB11-8B	EB11-8B.CIU	△
EB-11	8C	12-14.5 FT	EB11-8C	EB11-8C.CIU	□

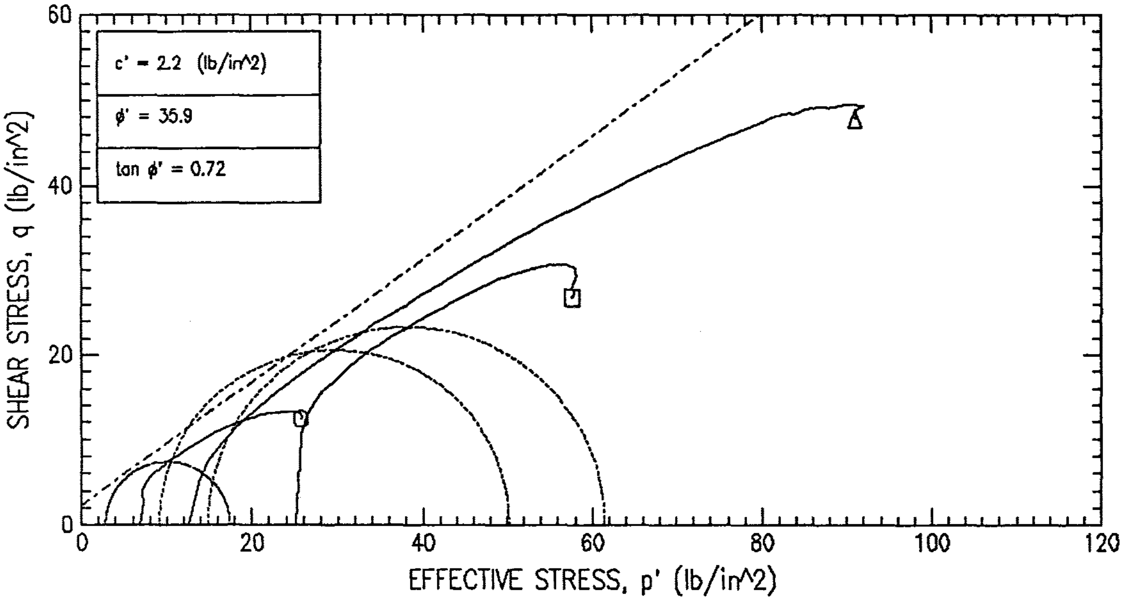


UNDRAINED TRIAXIAL TEST

Project Name : LOWER GUADALUPE RIVER

Boring No:	Sample No	Depth	Test No	Filename	Symbol
EB-11	8A	12-14.5 FT	EB11-8A	EB11-8A.CIU	○
EB-11	8B	12-14.5 FT	EB11-8B	EB11-8B.CIU	△
EB-11	8C	12-14.5 FT	EB11-8C	EB11-8C.CIU	□

UNDRAINED TRIAXIAL TEST

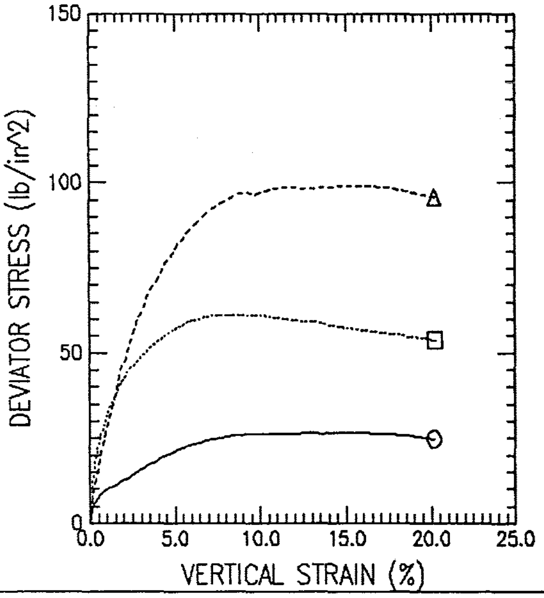


FAILURE SKETCHES

EB14-5A

EB14-5B

EB14-5C



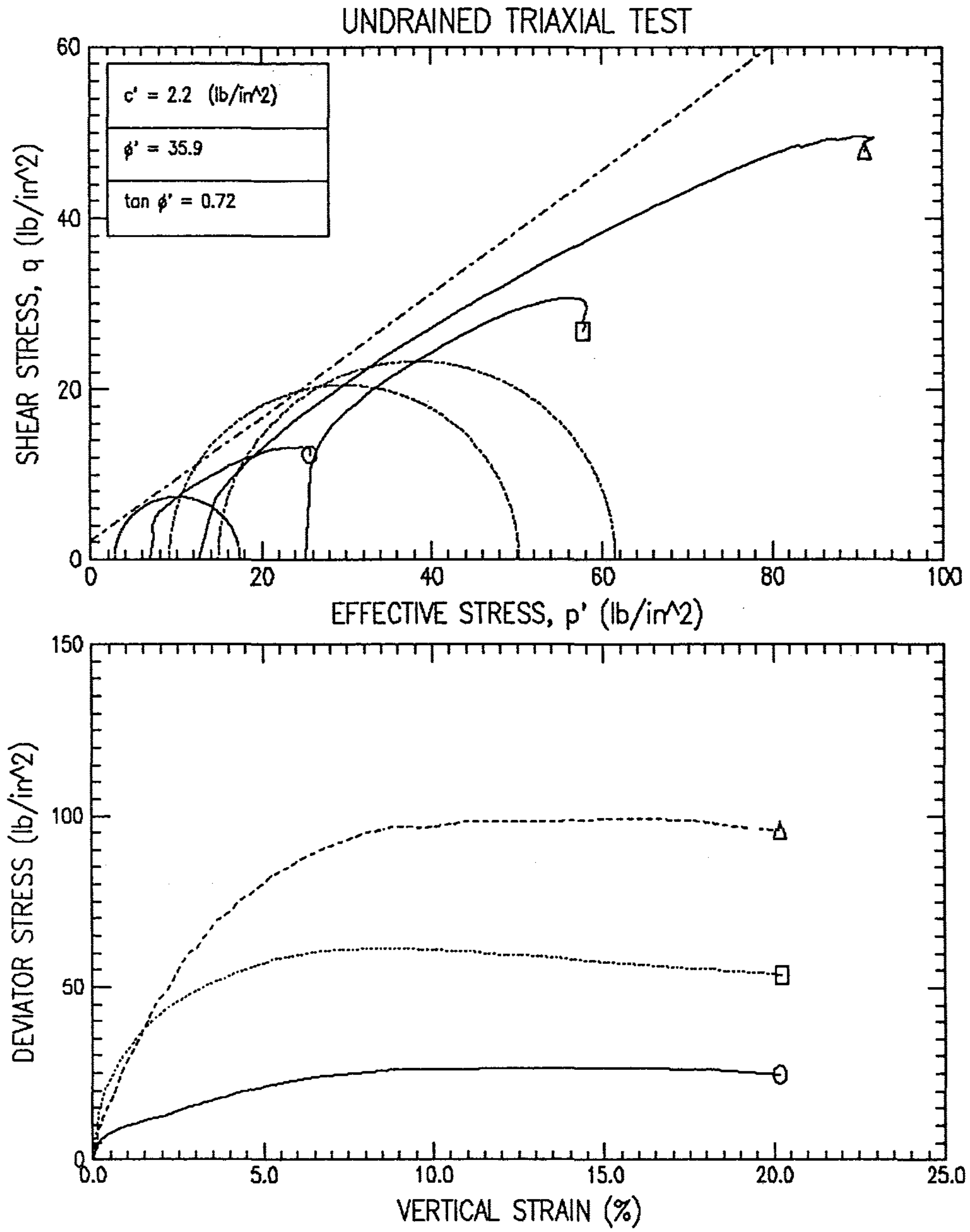
SYMBOL		○	△	□	
TEST NO.		EB14-5A	EB14-5B	EB14-5C	
INITIAL	WATER CONTENT (%)	17.75	13.61	16.18	
	DRY DENSITY (lb/ft^3)	110.00	119.63	114.16	
	SATURATION (%)	87.15	86.16	88.44	
	VOID RATIO	0.560	0.434	0.503	
BEFORE SHEAR	WATER CONTENT (%)	19.27	15.22	17.24	
	DRY DENSITY (lb/ft^3)	112.17	121.02	116.48	
	SATURATION (%)	100.04	100.14	100.15	
	VOID RATIO	0.530	0.418	0.473	
	BACK PRESS. (lb/in^2)	80.00	80.00	80.00	
MINOR PRIN. STRESS (lb/in^2)		6.90	12.60	25.20	
MAX. DEV. STRESS (lb/in^2)		27.13	100.23	62.51	
TIME TO FAILURE (min)		1066.30	1135.18	666.02	
RATE OF STRAIN INCR (%/min)		0.00	0.00	0.00	
INITIAL DIAMETER (in)		2.86	2.86	2.86	
INITIAL HEIGHT (in)		5.98	5.98	5.98	
B-VALUE		0.98	0.98	0.98	

STRAIN CONTROLLED

DESCRIPTION OF SPECIMENS:

1) BROWN FINE SANDY SILTY CLAY	2) BROWN FINE SANDY SILTY CLAY		3) BROWN FINE SANDY SILTY CLAY		
LL 32.64 PL 18.63 PI 14.01 GS 2.75	TYPE OF SPECIMEN SHELBY		TYPE OF TEST CU (R)		
REMARKS:	PROJECT LOWER GUADALUPE RIVER				
1) TXCIU TEST WITH EFFECTIVE PRESSURE OF 6.9 PSI	PROJECT NO.973017NB				
2) TXCIU TEST WITH EFFECTIVE PRESSURE OF 12.6 PSI	BORING NO. EB-14	SAMPLE NO.	5A	5B	5C
3) TXCIU TEST WITH EFFECTIVE PRESSURE OF 25.2 PSI	TECH. C. CAPPS	DEPTH/ELEV	6-8 FEET	6-8 FEET	6-8 FEET
	LABORATORY	DATE	07/20/98	07/20/98	07/20/98
	TRIAXIAL COMPRESSION TEST REPORT				

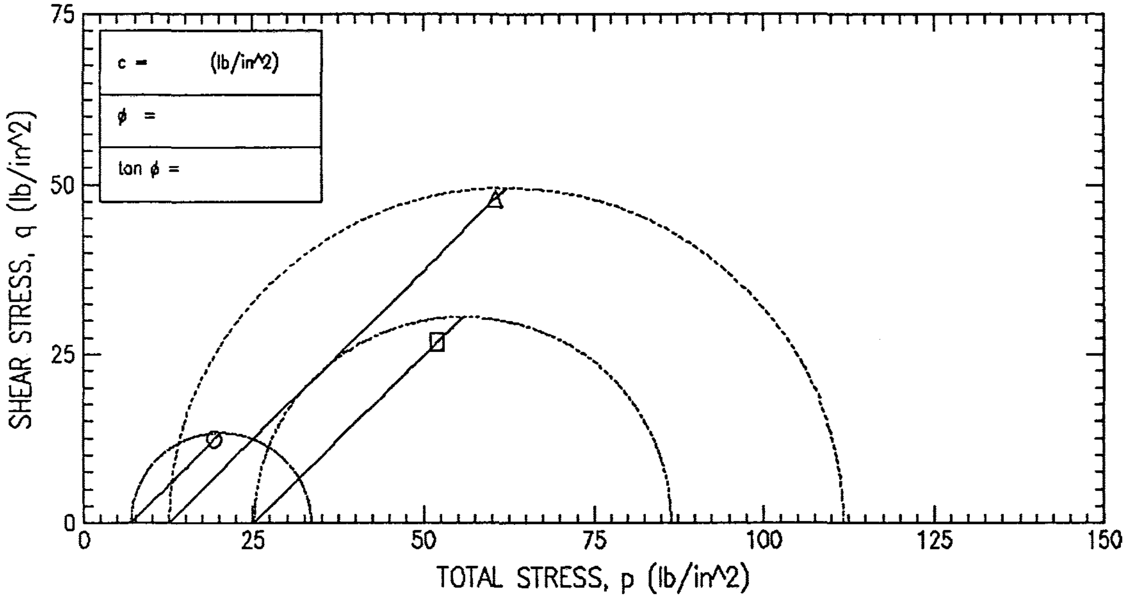
Wed 07-22-98, 16:48:48



Project Name : LOWER GUADALUPE RIVER

Boring No:	Sample No	Depth	Test No	Filename	Symbol
EB-14	5A	6-8 FEET	EB14-5A	EB14-5A.CIU	O
EB-14	5B	6-8 FEET	EB14-5B	EB14-5B.CIU	Δ
EB-14	5C	6-8 FEET	EB14-5C	EB14-5C.CIU	□

UNDRAINED TRIAXIAL TEST

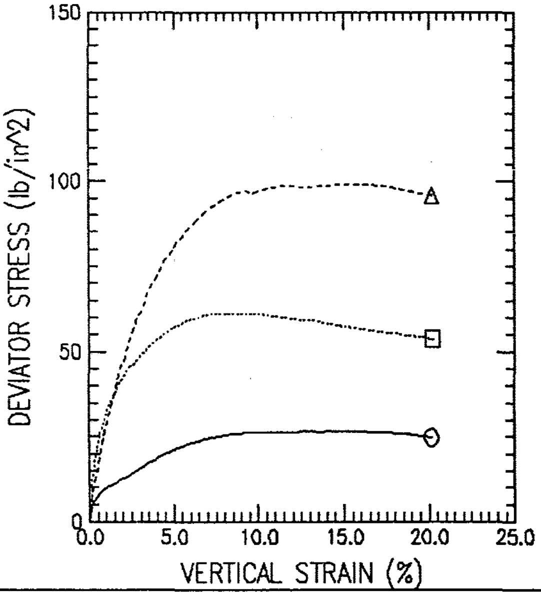


FAILURE SKETCHES

EB14-5A

EB14-5B

EB14-5C



SYMBOL		○	△	□	
TEST NO.		EB14-5A	EB14-5B	EB14-5C	
INITIAL	WATER CONTENT (%)	17.75	13.61	16.18	
	DRY DENSITY (lb/ft^3)	110.00	119.63	114.16	
	SATURATION (%)	87.15	86.16	88.44	
	VOID RATIO	0.560	0.434	0.503	
BEFORE SHEAR	WATER CONTENT (%)	19.27	15.22	17.24	
	DRY DENSITY (lb/ft^3)	112.17	121.02	116.48	
	SATURATION (%)	100.04	100.14	100.15	
	VOID RATIO	0.530	0.418	0.473	
	BACK PRESS. (lb/in^2)	80.00	80.00	80.00	
MINOR PRIN. STRESS (lb/in^2)		6.90	12.60	25.20	
MAX. DEV. STRESS (lb/in^2)		27.13	100.23	62.51	
TIME TO FAILURE (min)		1066.30	1135.18	666.02	
RATE OF STRAIN INCR (%/min)		0.00	0.00	0.00	
INITIAL DIAMETER (in)		2.86	2.86	2.86	
INITIAL HEIGHT (in)		5.98	5.98	5.98	
B-VALUE		0.98	0.98	0.98	

STRAIN CONTROLLED

DESCRIPTION OF SPECIMENS:

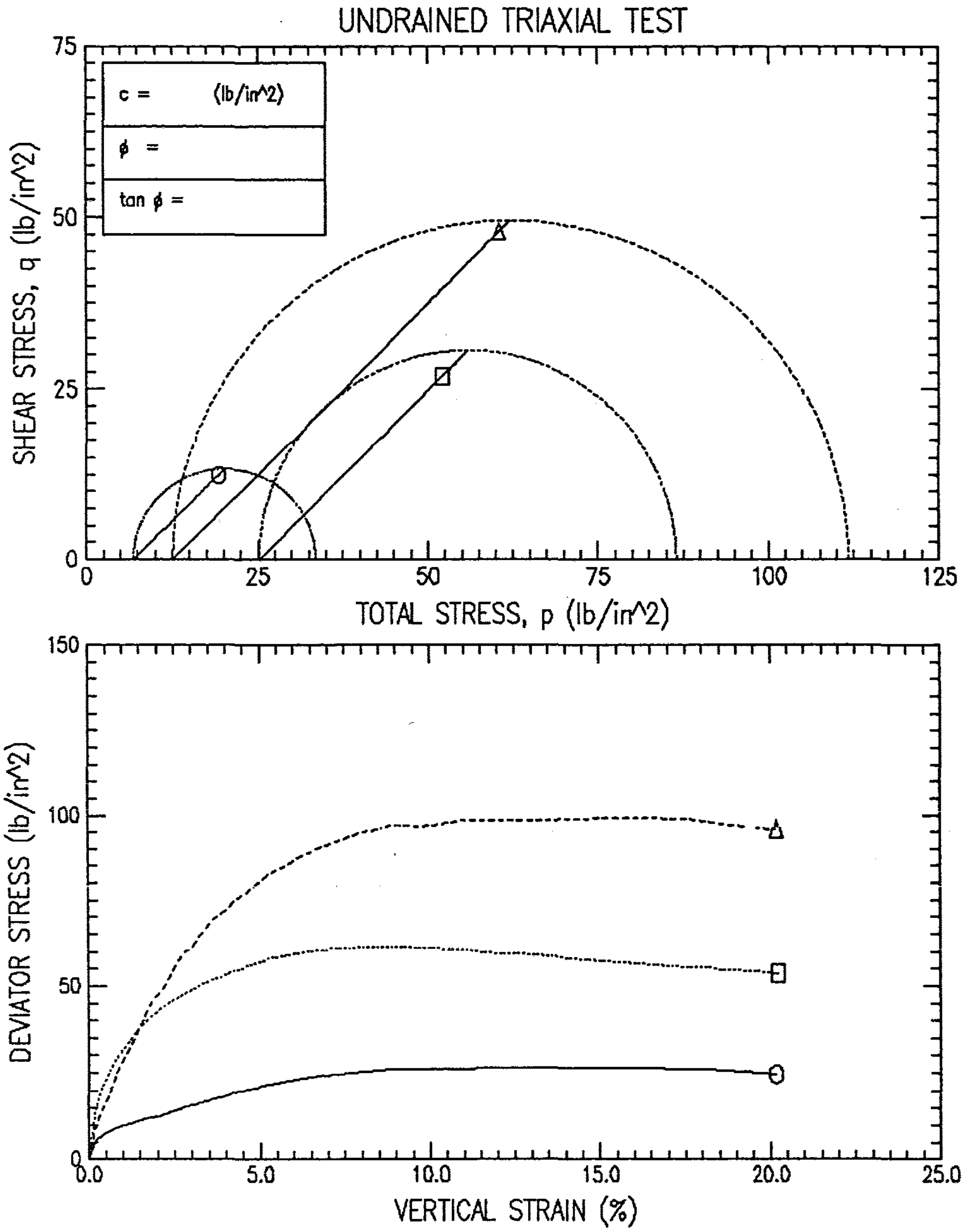
1) BROWN FINE SANDY SILTY CLAY 2) BROWN FINE SANDY SILTY CLAY 3) BROWN FINE SANDY SILTY CLAY

LL 32.64	PL 18.63	PI 14.01	GS 2.75	TYPE OF SPECIMEN SHELBY	TYPE OF TEST CU (R)	

REMARKS:	PROJECT LOWER GUADALUPE RIVER				
1) TXCIU TEST WITH EFFECTIVE PRESSURE OF 6.9 PSI	PROJECT NO.973017NB				
2) TXCIU TEST WITH EFFECTIVE PRESSURE OF 12.6 PSI	BORING NO. EB-14	SAMPLE NO.	5A	5B	5C
3) TXCIU TEST WITH EFFECTIVE PRESSURE OF 25.2 PSI	TECH. C. CAPPS	DEPTH/ELEV	6-8 FEET	6-8 FEET	6-8 FEET
	LABORATORY	DATE	07/20/98	07/20/98	07/20/98

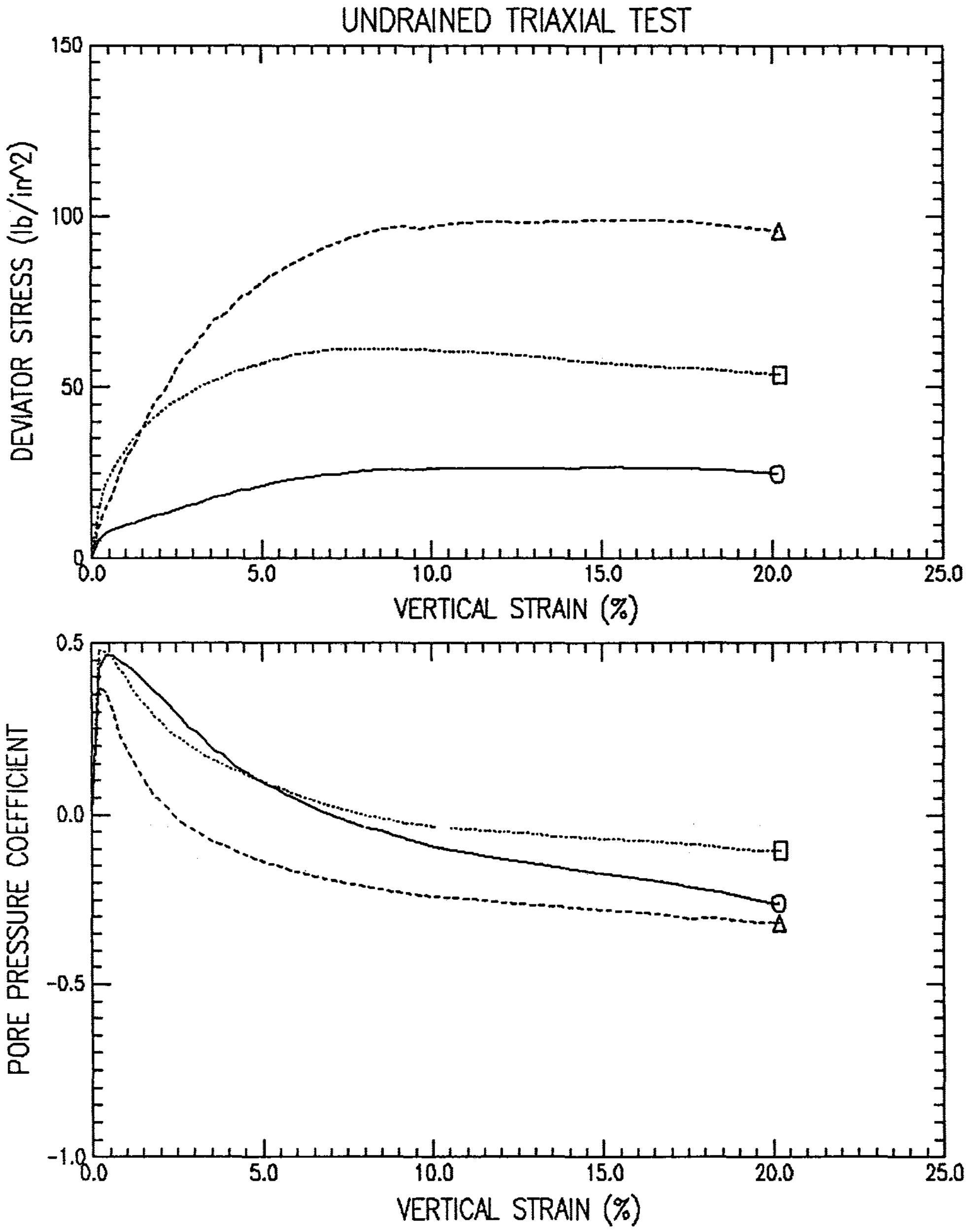
TRIAXIAL COMPRESSION TEST REPORT

Wed 07-22-98, 16:51:27



Project Name : LOWER GUADALUPE RIVER

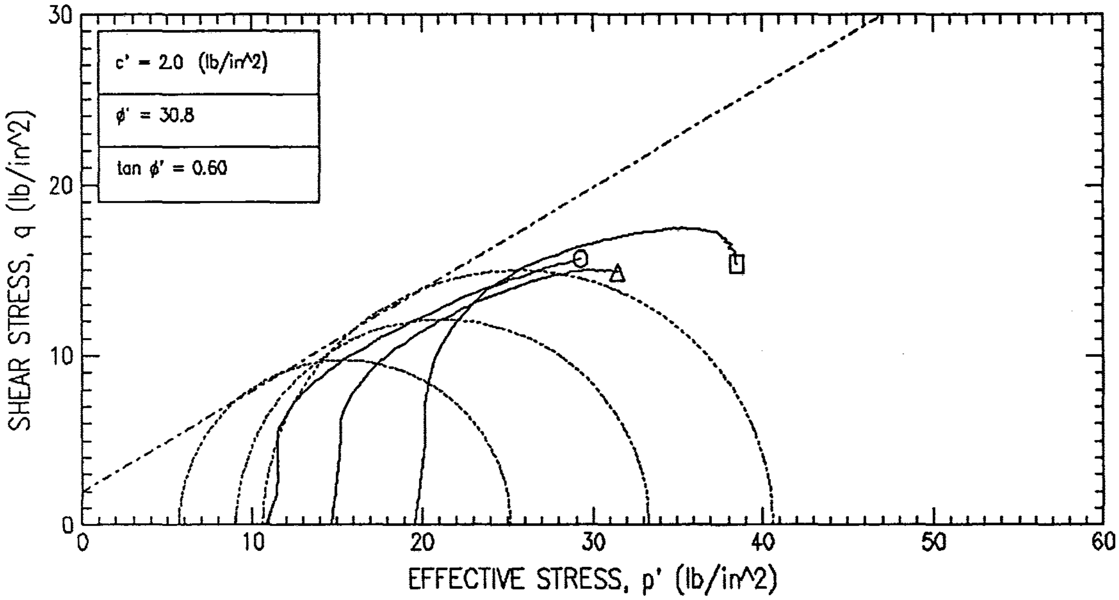
Boring No:	Sample No	Depth	Test No	Filename	Symbol
EB-14	5A	6-8 FEET	EB14-5A	EB14-5A.CIU	O
EB-14	5B	6-8 FEET	EB14-5B	EB14-5B.CIU	Δ
EB-14	5C	6-8 FEET	EB14-5C	EB14-5C.CIU	□



Project Name : LOWER GUADALUPE RIVER

Boring No:	Sample No	Depth	Test No	Filename	Symbol
EB-14	5A	6-8 FEET	EB14-5A	EB14-5A.CIU	○
EB-14	5B	6-8 FEET	EB14-5B	EB14-5B.CIU	Δ
EB-14	5C	6-8 FEET	EB14-5C	EB14-5C.CIU	□

UNDRAINED TRIAXIAL TEST

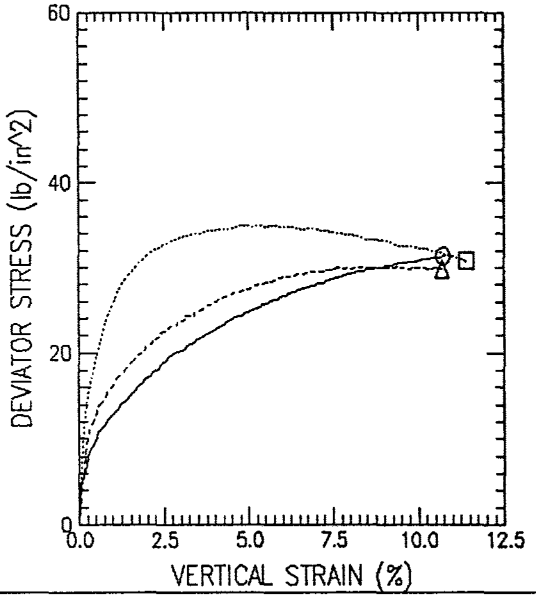


FAILURE SKETCHES

WB3-6A

WB3-6B

WB3-6C



SYMBOL		○	△	□	
TEST NO.		WB3-6A	WB3-6B	WB3-6C	
INITIAL	WATER CONTENT (%)	16.43	21.61	20.81	
	DRY DENSITY (lb/ft^3)	112.02	106.98	108.20	
	SATURATION (%)	79.71	92.98	92.17	
	VOID RATIO	0.588	0.662	0.644	
BEFORE SHEAR	WATER CONTENT (%)	18.56	21.82	21.71	
	DRY DENSITY (lb/ft^3)	116.34	109.70	109.89	
	SATURATION (%)	100.09	100.11	100.08	
	VOID RATIO	0.529	0.621	0.618	
	BACK PRESS. (lb/in^2)	80.00	80.00	80.00	
MINOR PRIN. STRESS (lb/in^2)		10.80	14.70	19.60	
MAX. DEV. STRESS (lb/in^2)		32.54	30.86	35.50	
TIME TO FAILURE (min)		810.00	710.00	390.00	
RATE OF STRAIN INCR (%/min)		0.00	0.00	0.00	
INITIAL DIAMETER (in)		2.86	2.86	2.86	
INITIAL HEIGHT (in)		5.98	5.98	5.98	
B-VALUE		0.98	0.98	0.98	

STRAIN CONTROLLED

DESCRIPTION OF SPECIMENS:

1) BROWN SANDY CLAY 2) MOTTLED LT. TO DARK BROWN SANDY CLAY 3) MOTTLED LT. TO DARK BROWN SANDY CLAY

LL	PL	PI	GS 2.85	TYPE OF SPECIMEN SHELBY	TYPE OF TEST CU (R)	

REMARKS:

1) TXCIU TEST WITH EFFECTIVE PRESSURE OF 10.8 PSI

2) TXCIU TEST WITH EFFECTIVE PRESSURE OF 14.7 PSI

3) TXCIU TEST WITH EFFECTIVE PRESSURE OF 19.6 PSI

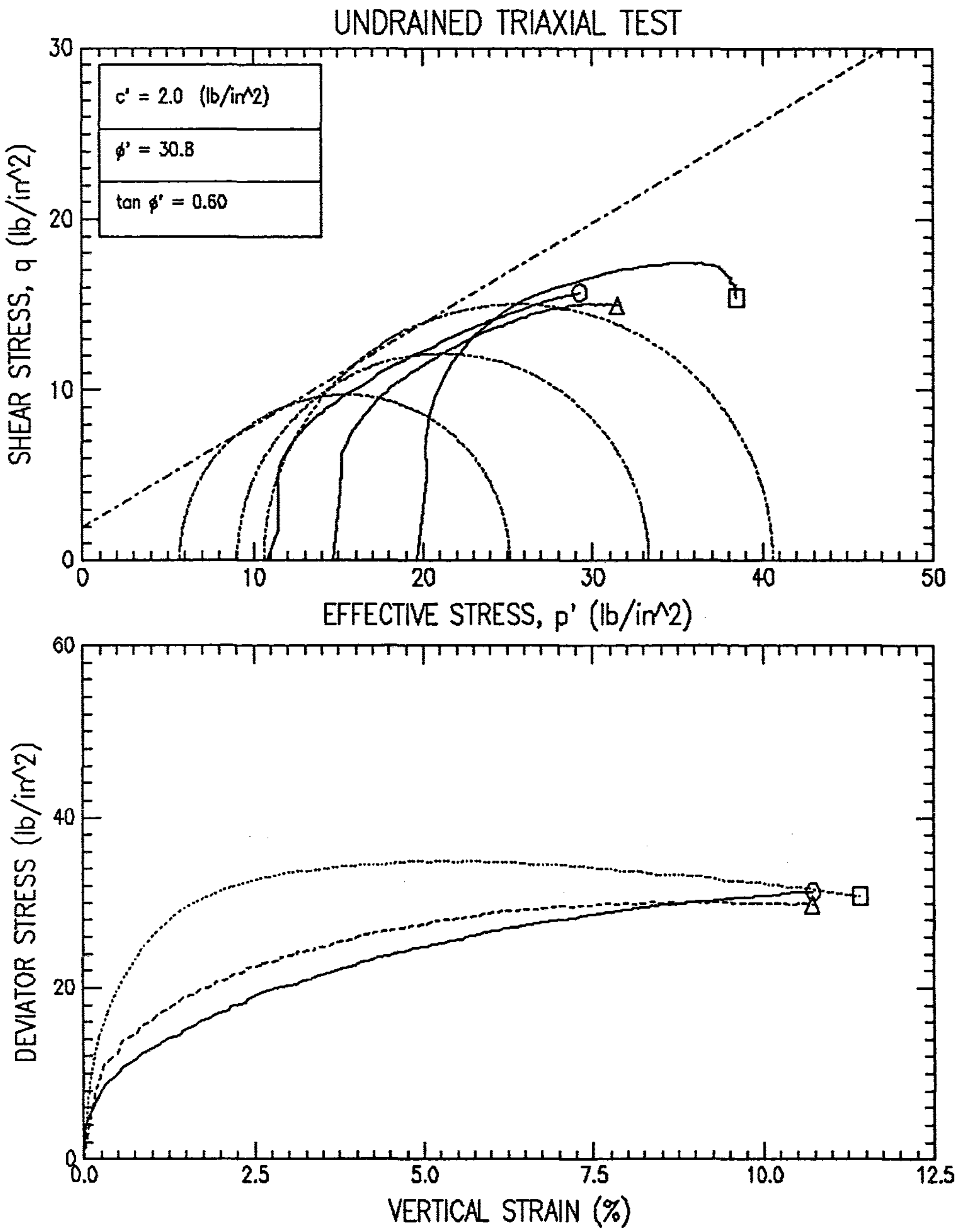
PROJECT LOWER GUADALUPE RIVER

PROJECT NO.973017NB

BORING NO. WB-3	SAMPLE NO.	6A	6B	6C	
TECH. C. CAPPS	DEPTH/ELEV	9-12.5 FT	9-12.5 FT	9-12.5 FT	
LABORATORY	DATE	06/23/98	06/23/98	06/23/98	

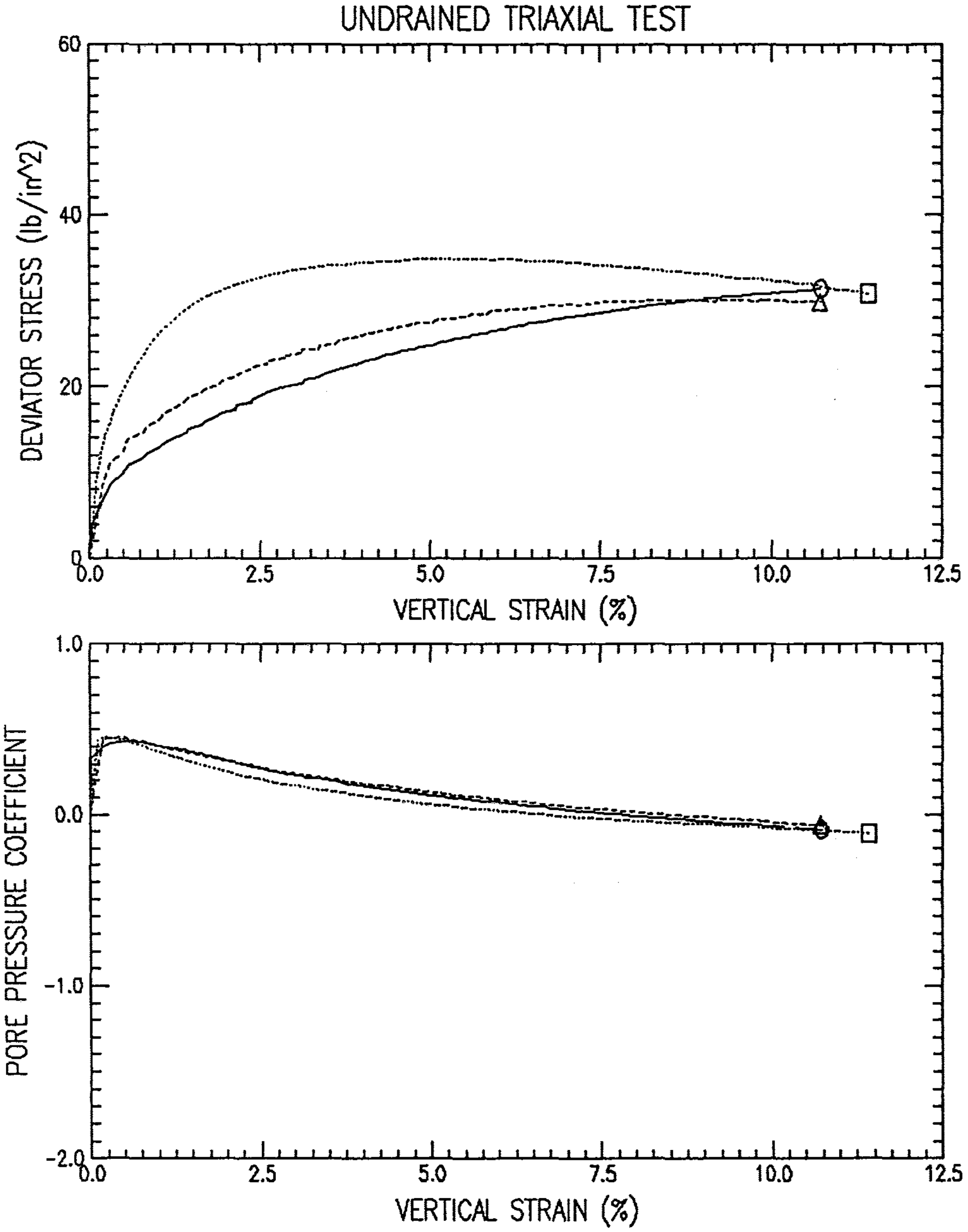
TRIAXIAL COMPRESSION TEST REPORT

Mon 07-06-98, 17:04:07



Project Name : LOWER GUADALUPE RIVER

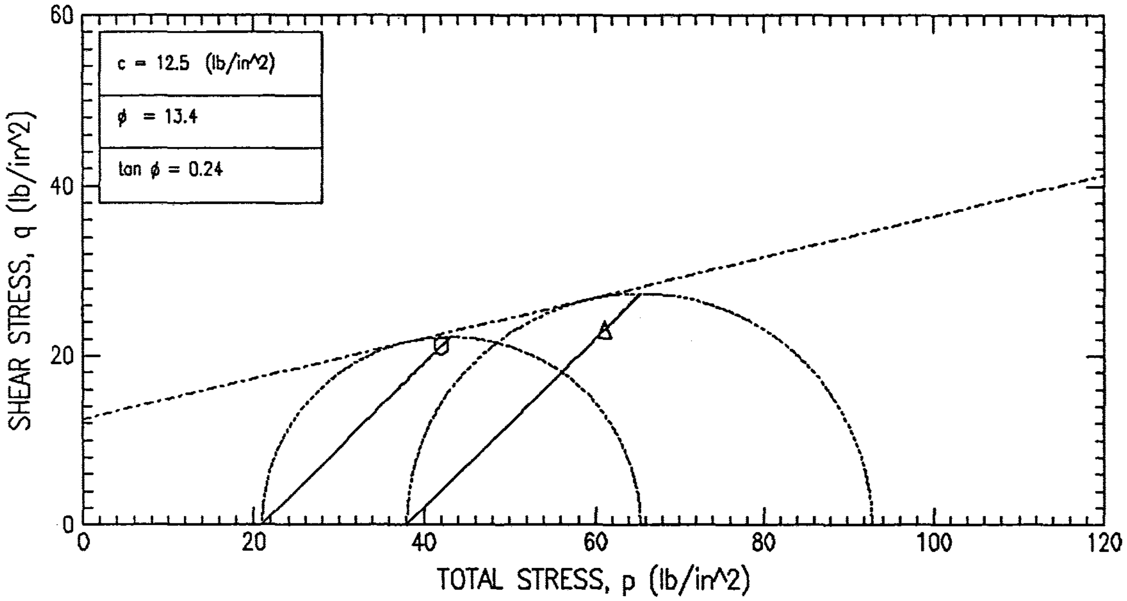
Boring No:	Sample No	Depth	Test No	Filename	Symbol
WB-3	6A	9-12.5 FT	WB3-6A	WB-3-6A.CIU	○
WB-3	6B	9-12.5 FT	WB3-6B	WB-3-6B.CIU	Δ
WB-3	6C	9-12.5 FT	WB3-6C	WB-3-6C.CIU	□



Project Name : LOWER GUADALUPE RIVER

Boring No:	Sample No	Depth	Test No	Filename	Symbol
WB-3	6A	9-12.5 FT	WB3-6A	WB-3-6A.CIU	○
WB-3	6B	9-12.5 FT	WB3-6B	WB-3-6B.CIU	△
WB-3	6C	9-12.5 FT	WB3-6C	WB-3-6C.CIU	□

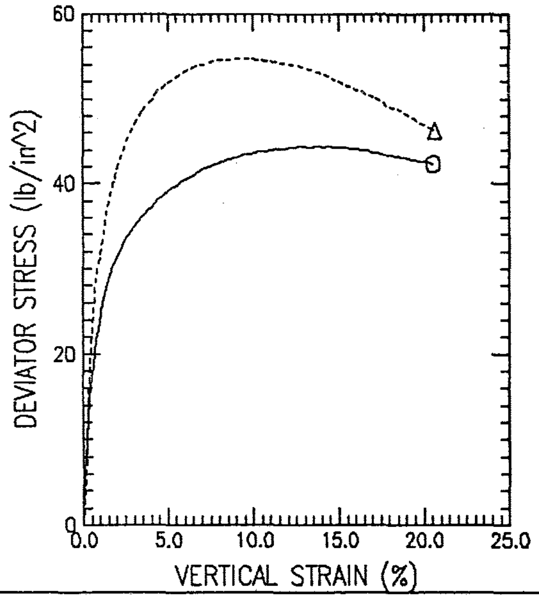
UNDRAINED TRIAXIAL TEST



FAILURE SKETCHES

WB3-12B

WB3-12C



SYMBOL		○	△		
TEST NO.		WB3-12B	WB3-12C		
INITIAL	WATER CONTENT (%)	20.60	22.25		
	DRY DENSITY (lb/ft^3)	108.12	105.13		
	SATURATION (%)	96.50	96.76		
	VOID RATIO	0.587	0.632		
BEFORE SHEAR	WATER CONTENT (%)	19.58	20.31		
	DRY DENSITY (lb/ft^3)	111.59	110.15		
	SATURATION (%)	100.12	100.13		
	VOID RATIO	0.538	0.558		
	BACK PRESS. (lb/in^2)	80.00	80.00		
MINOR PRIN. STRESS (lb/in^2)		20.90	38.00		
MAX. DEV. STRESS (lb/in^2)		45.86	57.41		
TIME TO FAILURE (min)		980.53	684.47		
RATE OF STRAIN INCR (%/min)		0.00	0.00		
INITIAL DIAMETER (in)		2.86	2.86		
INITIAL HEIGHT (in)		5.98	5.98		
B-VALUE		0.98	0.98		

STRAIN CONTROLLED

DESCRIPTION OF SPECIMENS:

1) DARK BROWN FINE SANDY CLAY

2) DARK BROWN FINE SANDY CLAY

LL 35.16	PL 19.53	PI 15.63	GS 2.75	TYPE OF SPECIMEN SHELBY	TYPE OF TEST CU (R)

REMARKS:

1) TXCIU TEST WITH EFFECTIVE PRESSURE OF 20.9 PSI

2) TXCIU TEST WITH EFFECTIVE PRESSURE OF 38.0 PSI

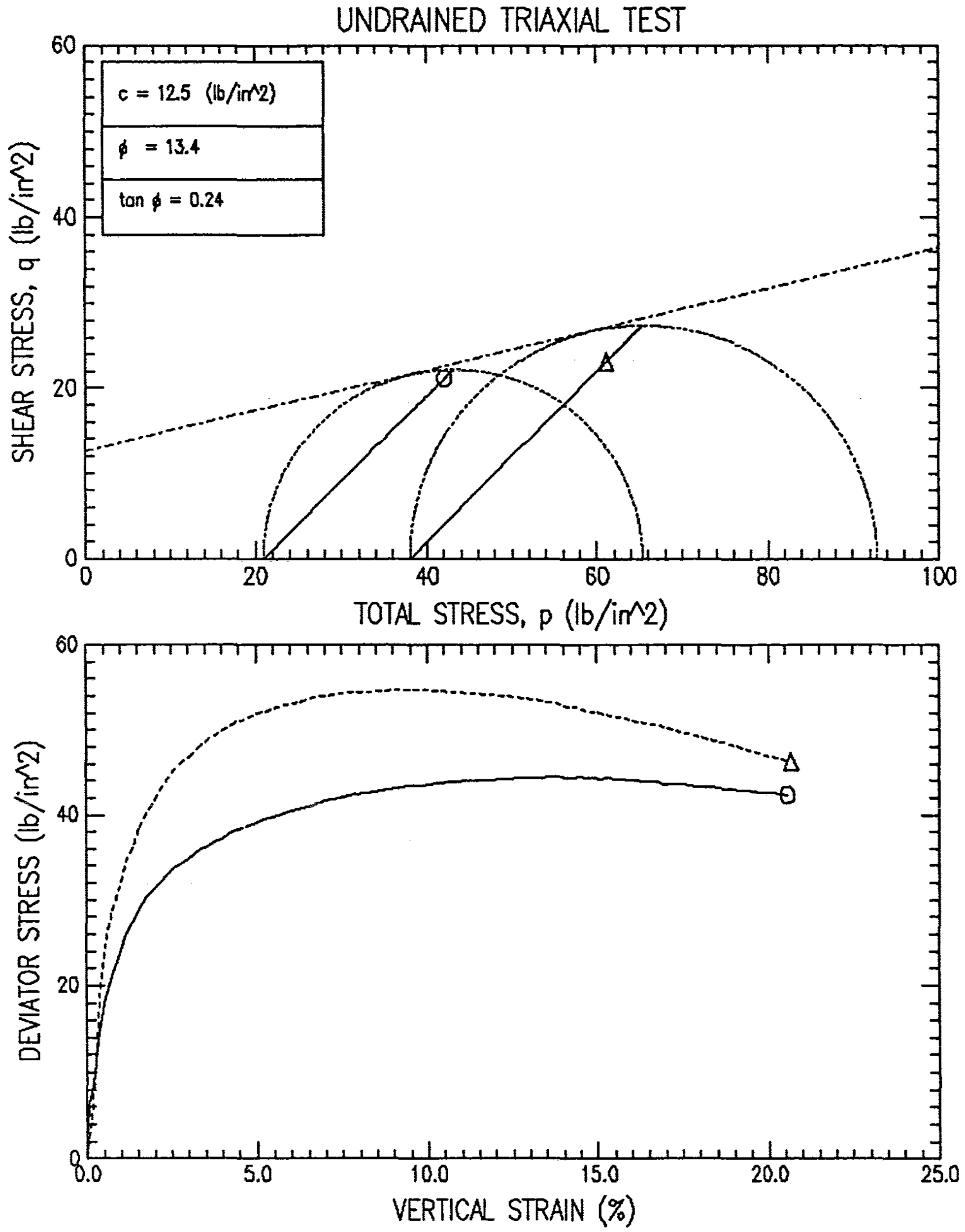
PROJECT LOWER GUADALUPE RIVER

PROJECT NO.973017NB

BORING NO. WB-3	SAMPLE NO.	12B	12C		
TECH. C. CAPPS	DEPTH/ELEV	20.5-22 FT	20.5-22 FT		
LABORATORY	DATE	06/24/98	06/24/98		

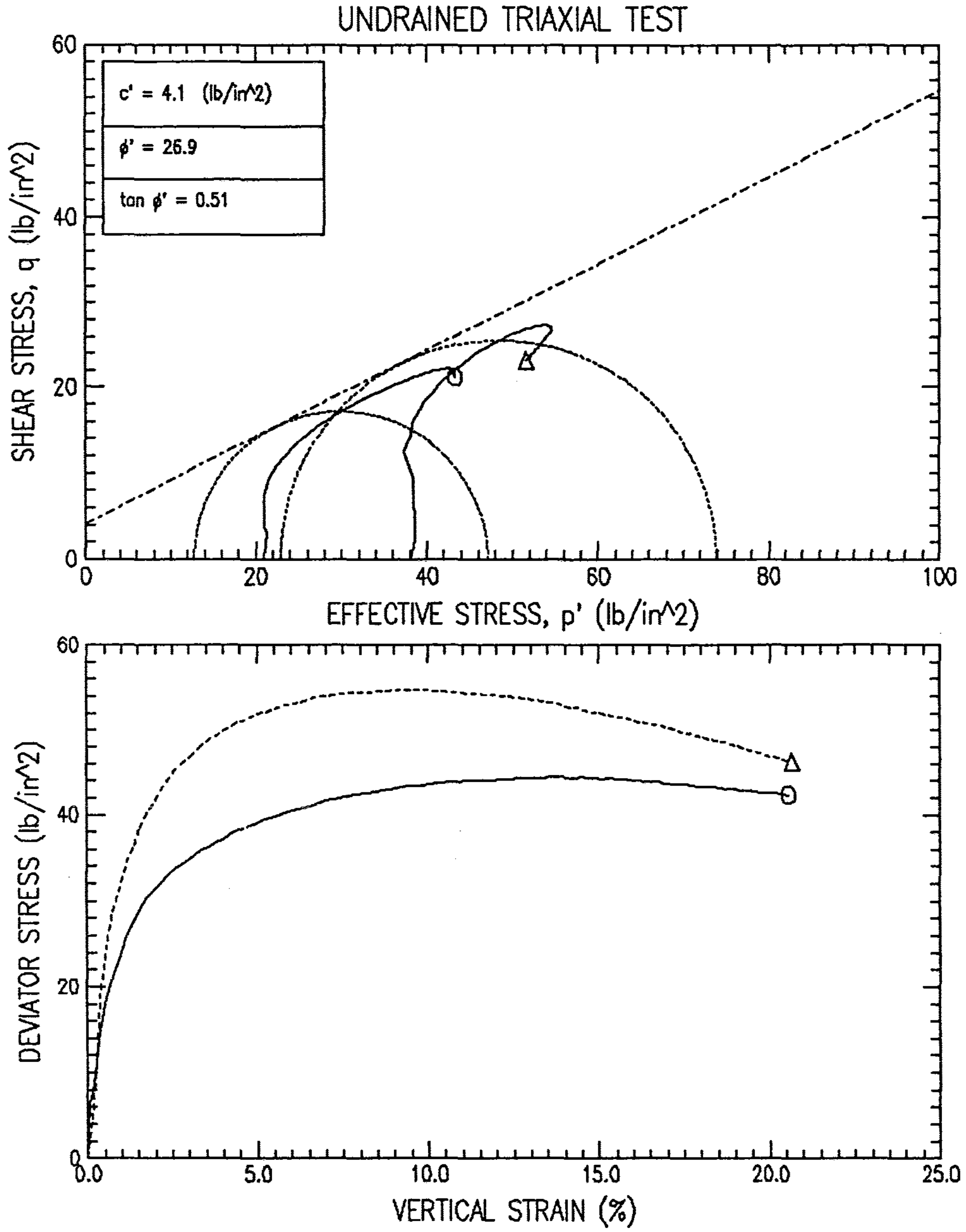
TRIAXIAL COMPRESSION TEST REPORT

Tue 06-30-98, 15:45:02



Project Name : LOWER GUADALUPE RIVER

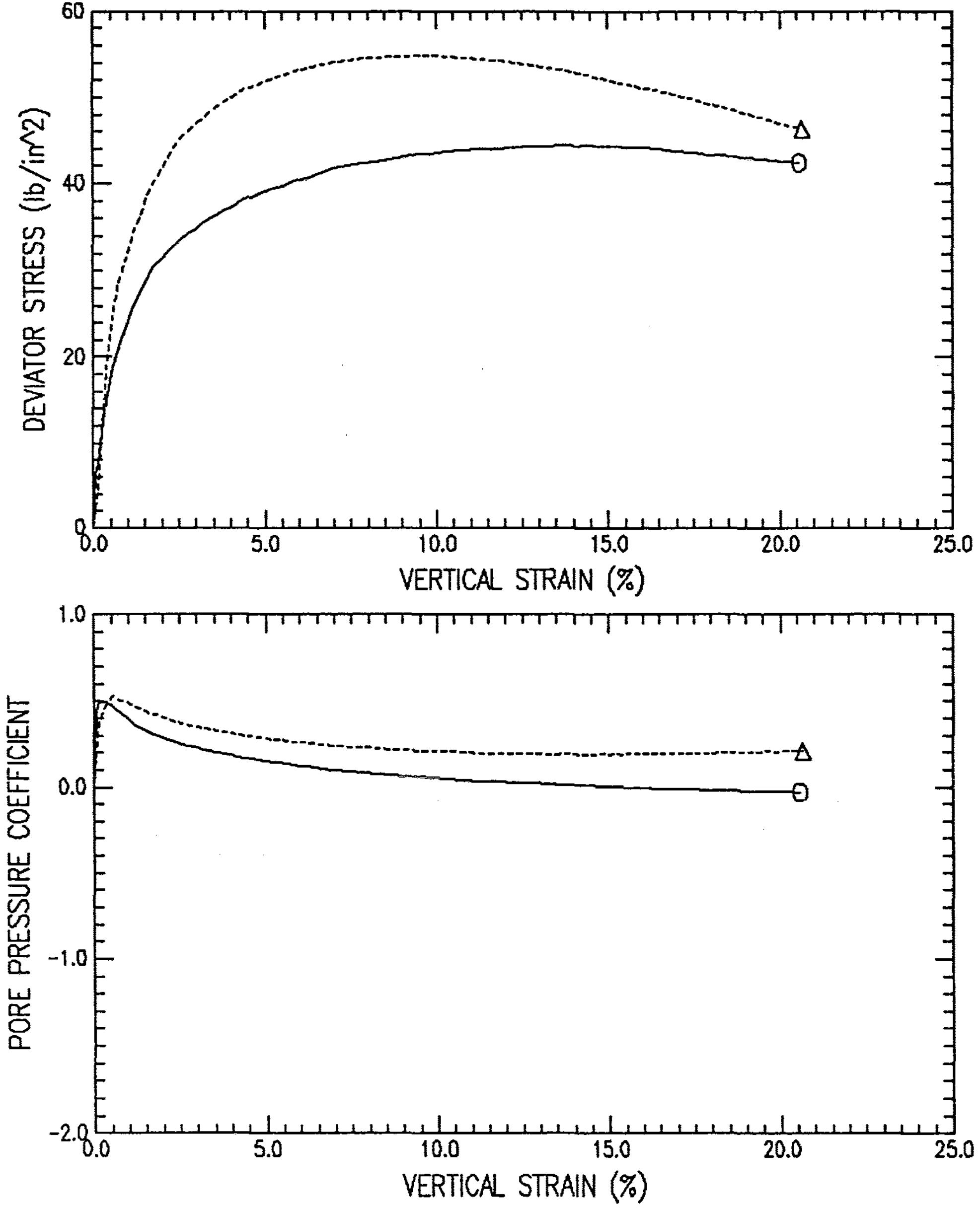
Boring No:	Sample No	Depth	Test No	Filename	Symbol
WB-3	12B	20.5-22 FT	WB3-12B	WB3-12B.CIU	O
WB-3	12C	20.5-22 FT	WB3-12C	WB3-12C.CIU	Δ



Project Name : LOWER GUADALUPE RIVER

Boring No:	Sample No	Depth	Test No	Filename	Symbol
WB-3	12B	20.5-22 FT	WB3-12B	WB3-12B.CIU	O
WB-3	12C	20.5-22 FT	WB3-12C	WB3-12C.CIU	Δ

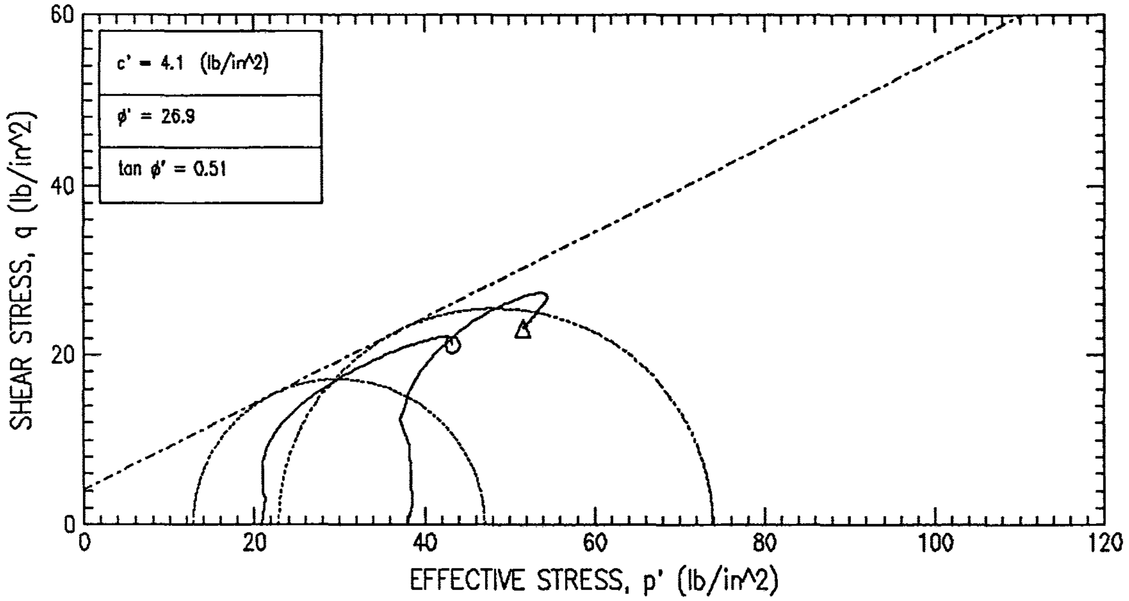
UNDRAINED TRIAXIAL TEST



Project Name : LOWER GUADALUPE RIVER

Boring No:	Sample No	Depth	Test No	Filename	Symbol
WB-3	12B	20.5-22 FT	WB3-12B	WB3-12B.CIU	O
WB-3	12C	20.5-22 FT	WB3-12C	WB3-12C.CIU	Δ

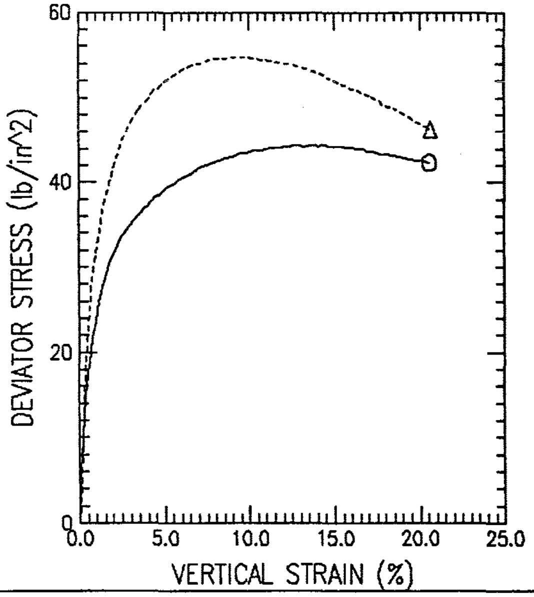
UNDRAINED TRIAXIAL TEST



FAILURE SKETCHES

WB3-12B

WB3-12C



SYMBOL		○	△		
TEST NO.		WB3-12B	WB3-12C		
INITIAL	WATER CONTENT (%)	20.60	22.25		
	DRY DENSITY (lb/ft^3)	108.12	105.13		
	SATURATION (%)	96.50	96.76		
	VOID RATIO	0.587	0.632		
BEFORE SHEAR	WATER CONTENT (%)	19.58	20.31		
	DRY DENSITY (lb/ft^3)	111.59	110.15		
	SATURATION (%)	100.12	100.13		
	VOID RATIO	0.538	0.558		
	BACK PRESS. (lb/in^2)	80.00	80.00		
MINOR PRIN. STRESS (lb/in^2)		20.90	38.00		
MAX. DEV. STRESS (lb/in^2)		45.86	57.41		
TIME TO FAILURE (min)		980.53	684.47		
RATE OF STRAIN INCR (%/min)		0.00	0.00		
INITIAL DIAMETER (in)		2.86	2.86		
INITIAL HEIGHT (in)		5.98	5.98		
B-VALUE		0.98	0.98		

STRAIN CONTROLLED

DESCRIPTION OF SPECIMENS:

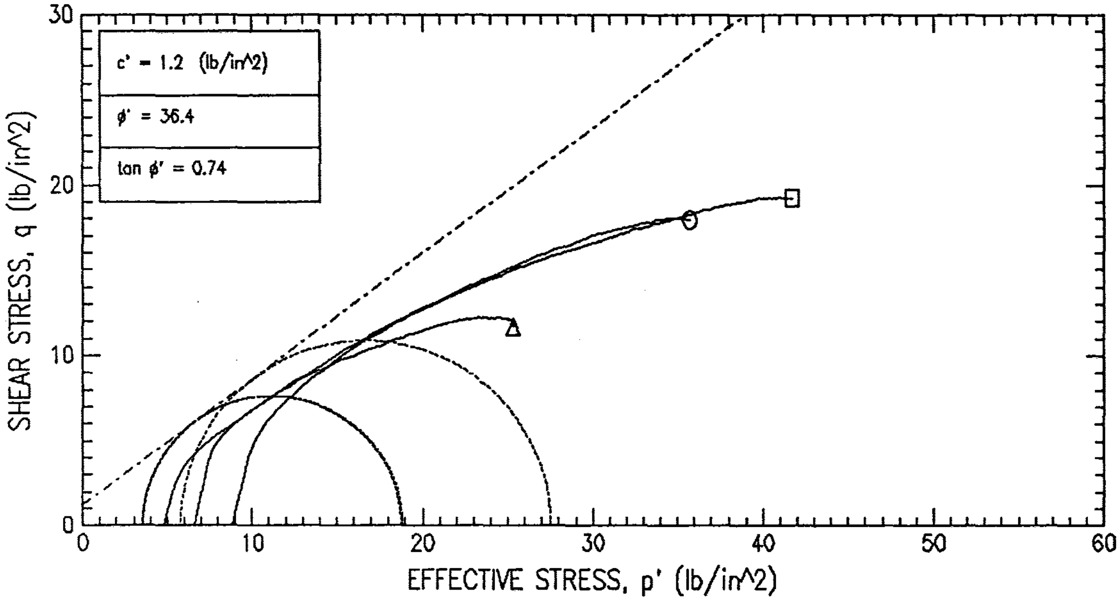
1) DARK BROWN FINE SANDY CLAY 2) DARK BROWN FINE SANDY CLAY

LL 35.16	PL 19.53	PI 15.63	GS 2.75	TYPE OF SPECIMEN SHELBY	TYPE OF TEST CU (R)	

REMARKS:	PROJECT LOWER GUADALUPE RIVER				
1) TXCIU TEST WITH EFFECTIVE PRESSURE OF 20.9 PSI	PROJECT NO.973017NB				
2) TXCIU TEST WITH EFFECTIVE PRESSURE OF 38.0 PSI	BORING NO. WB-3	SAMPLE NO.	12B	12C	
	TECH. C. CAPPS	DEPTH/ELEV	20.5-22 FT	20.5-22 FT	
	LABORATORY	DATE	06/24/98	06/24/98	
	TRIAXIAL COMPRESSION TEST REPORT				

Tue 06-30-98, 15:46:02

UNDRAINED TRIAXIAL TEST

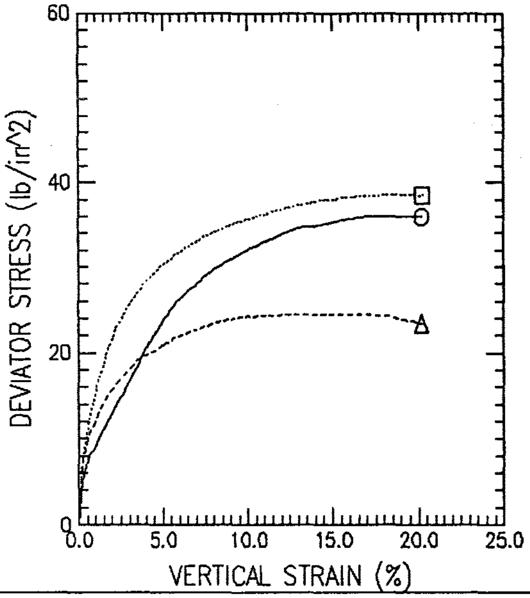


FAILURE SKETCHES

WB4-3A

WB4-3B

WB4-3C



	SYMBOL	○	△	□	
	TEST NO.	WB4-3A	WB4-3B	WB4-3C	
INITIAL	WATER CONTENT (%)	16.77	17.24	15.79	
	DRY DENSITY (lb/ft^3)	110.81	112.00	116.90	
	SATURATION (%)	83.51	88.47	92.10	
	VOID RATIO	0.554	0.538	0.473	
BEFORE SHEAR	WATER CONTENT (%)	19.47	18.88	16.95	
	DRY DENSITY (lb/ft^3)	112.04	113.24	117.36	
	SATURATION (%)	100.02	100.02	100.09	
	VOID RATIO	0.537	0.521	0.467	
	BACK PRESS. (lb/in^2)	80.00	80.00	80.00	
	MINOR PRIN. STRESS (lb/in^2)	4.80	6.60	8.80	
	MAX. DEV. STRESS (lb/in^2)	36.44	24.78	38.69	
	TIME TO FAILURE (min)	1298.78	1117.00	1337.65	
	RATE OF STRAIN INCR (%/min)	0.00	0.00	0.00	
	INITIAL DIAMETER (in)	2.86	2.86	2.86	
	INITIAL HEIGHT (in)	5.98	5.98	5.98	
	B-VALUE	0.98	0.98	0.98	

STRAIN CONTROLLED

DESCRIPTION OF SPECIMENS:

1) MOTTLED LT TO DRK BROWN SA-CLAY W/ GRAVEL 2) MOTTLED LT TO DRK BROWN SA-CLAY W/ GRAVEL 3) MOTTLED LT TO DRK BROWN SA-CLAY W/ GRAVEL

LL 37.04	PL 17.34	PI 19.70	GS 2.76	TYPE OF SPECIMEN SHELBY	TYPE OF TEST CU (R)

REMARKS:

1) TXCIU TEST WITH EFFECTIVE PRESSURE OF 4.8 PSI

2) TXCIU TEST WITH EFFECTIVE PRESSURE OF 6.6 PSI

3) TXCIU TEST WITH EFFECTIVE PRESSURE OF 8.8 PSI

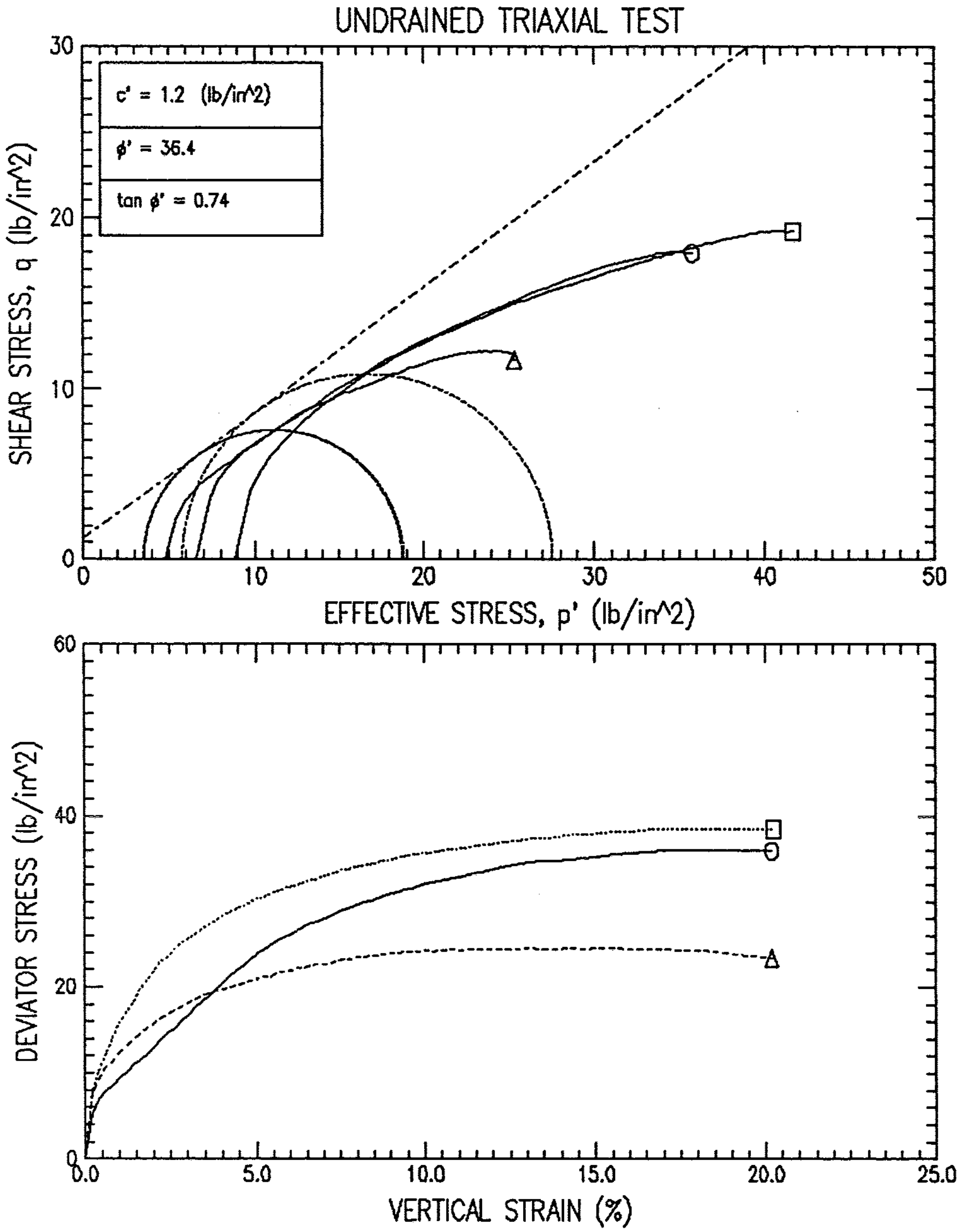
PROJECT LOWER GUADALUPE RIVER

PROJECT NO.973017NB

BORING NO. WB-4	SAMPLE NO.	3A	3B	3C	
TECH. C. CAPPS	DEPTH/ELEV	4-6.5 FEET	4-6.5 FEET	4-6.5 FEET	
LABORATORY	DATE	07/09/98	07/09/98	07/06/98	

TRIAXIAL COMPRESSION TEST REPORT

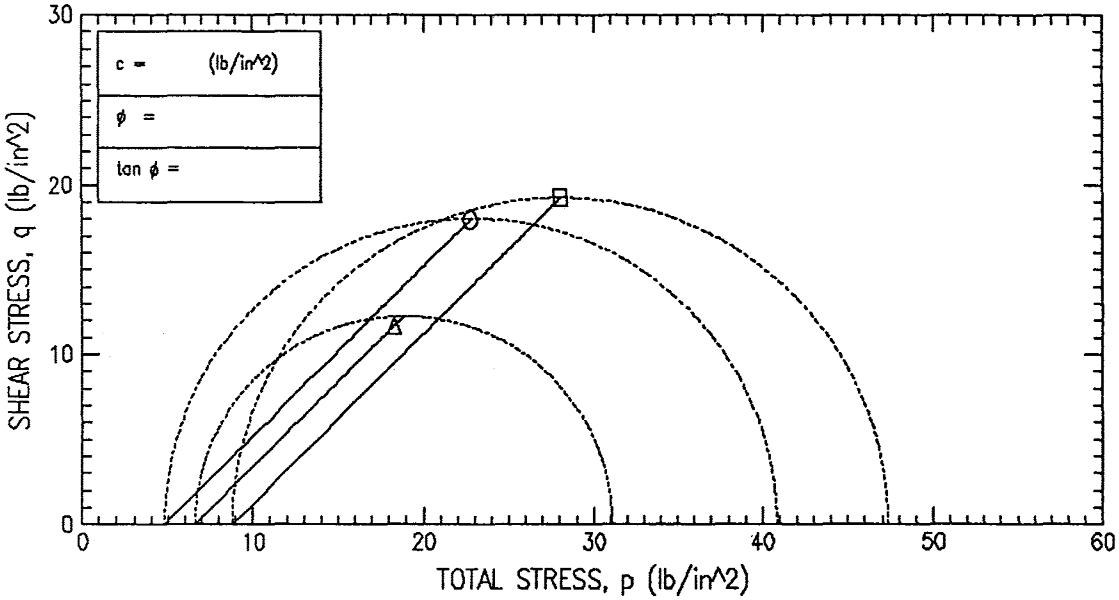
Mon 07-13-98, 11:31:39



Project Name : LOWER GUADALUPE RIVER

Boring No:	Sample No	Depth	Test No	Filename	Symbol
WB-4	3A	4-6.5 FEET	WB4-3A	WB4-3A.CIU	○
WB-4	3B	4-6.5 FEET	WB4-3B	WB4-3B.CIU	Δ
WB-4	3C	4-6.5 FEET	WB4-3C	WB4-3C.CIU	□

UNDRAINED TRIAXIAL TEST

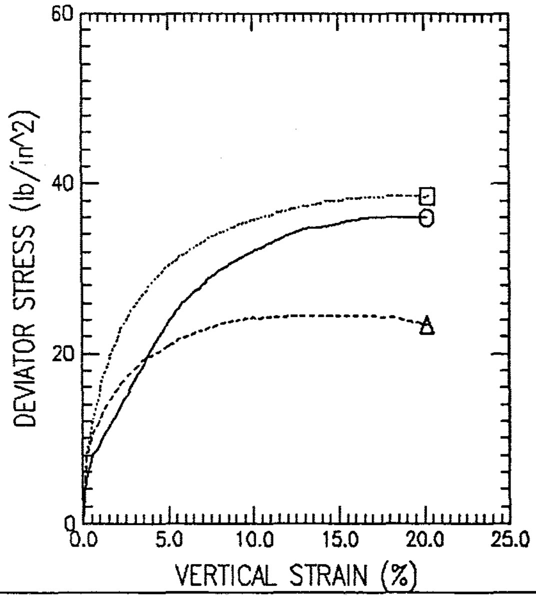


FAILURE SKETCHES

WB4-3A

WB4-3B

WB4-3C



SYMBOL		○	△	□	
TEST NO.		WB4-3A	WB4-3B	WB4-3C	
INITIAL	WATER CONTENT (%)	16.77	17.24	15.79	
	DRY DENSITY (lb/ft^3)	110.81	112.00	116.90	
	SATURATION (%)	83.51	88.47	92.10	
	VOID RATIO	0.554	0.538	0.473	
BEFORE SHEAR	WATER CONTENT (%)	19.47	18.88	16.95	
	DRY DENSITY (lb/ft^3)	112.04	113.24	117.36	
	SATURATION (%)	100.02	100.02	100.09	
	VOID RATIO	0.537	0.521	0.467	
	BACK PRESS. (lb/in^2)	80.00	80.00	80.00	
MINOR PRIN. STRESS (lb/in^2)		4.80	6.60	8.80	
MAX. DEV. STRESS (lb/in^2)		36.44	24.78	38.69	
TIME TO FAILURE (min)		1298.78	1117.00	1337.65	
RATE OF STRAIN INCR (%/min)		0.00	0.00	0.00	
INITIAL DIAMETER (in)		2.86	2.86	2.86	
INITIAL HEIGHT (in)		5.98	5.98	5.98	
B-VALUE		0.98	0.98	0.98	

STRAIN CONTROLLED

DESCRIPTION OF SPECIMENS:

1) MOTTLED LT TO DRK BROWN SA-CLAY W/ GRAVEL 2) MOTTLED LT TO DRK BROWN SA-CLAY W/ GRAVEL 3) MOTTLED LT TO DRK BROWN SA-CLAY W/ GRAVEL

LL 37.04	PL 17.34	PI 19.70	GS 2.76	TYPE OF SPECIMEN SHELBY	TYPE OF TEST CU (R)

REMARKS:

1) TXCIU TEST WITH EFFECTIVE PRESSURE OF 4.8 PSI

2) TXCIU TEST WITH EFFECTIVE PRESSURE OF 6.6 PSI

3) TXCIU TEST WITH EFFECTIVE PRESSURE OF 8.8 PSI

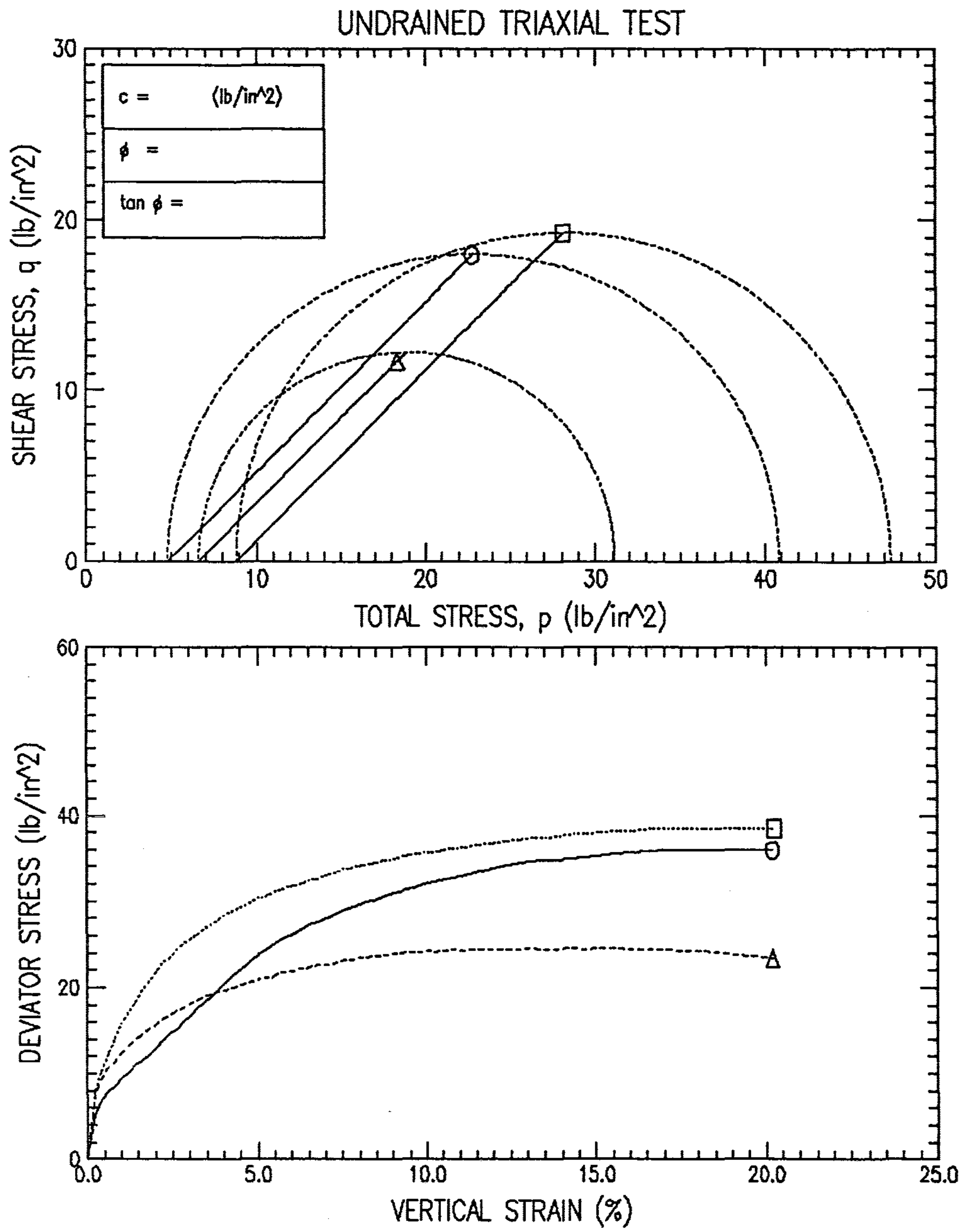
PROJECT LOWER GUADALUPE RIVER

PROJECT NO.973017NB

BORING NO. WB-4	SAMPLE NO.	3A	3B	3C
TECH. C. CAPPS	DEPTH/ELEV	4-6.5 FEET	4-6.5 FEET	4-6.5 FEET
LABORATORY	DATE	07/09/98	07/09/98	07/06/98

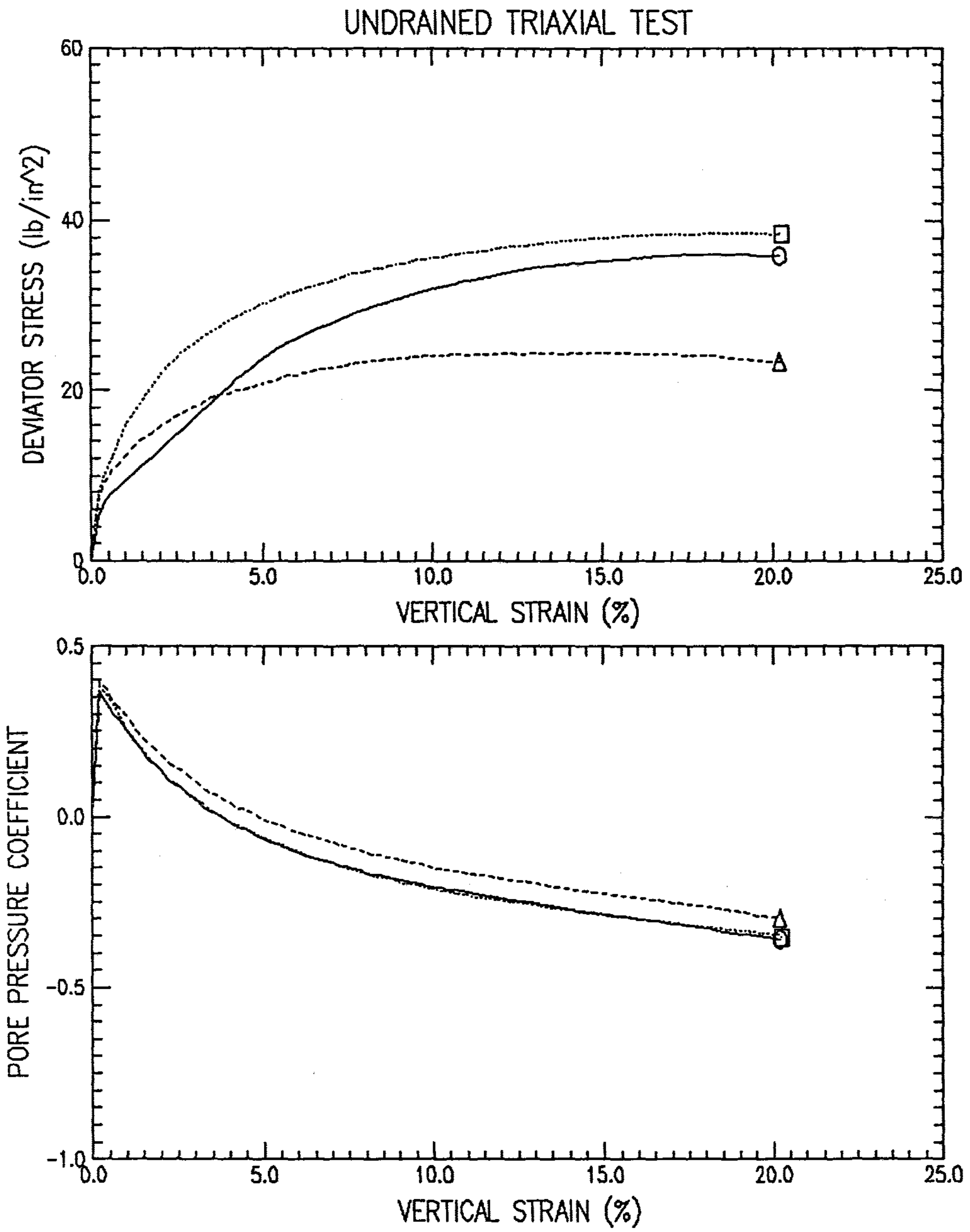
TRIAXIAL COMPRESSION TEST REPORT

Mon 07-13-98, 11:33:42



Project Name : LOWER GUADALUPE RIVER

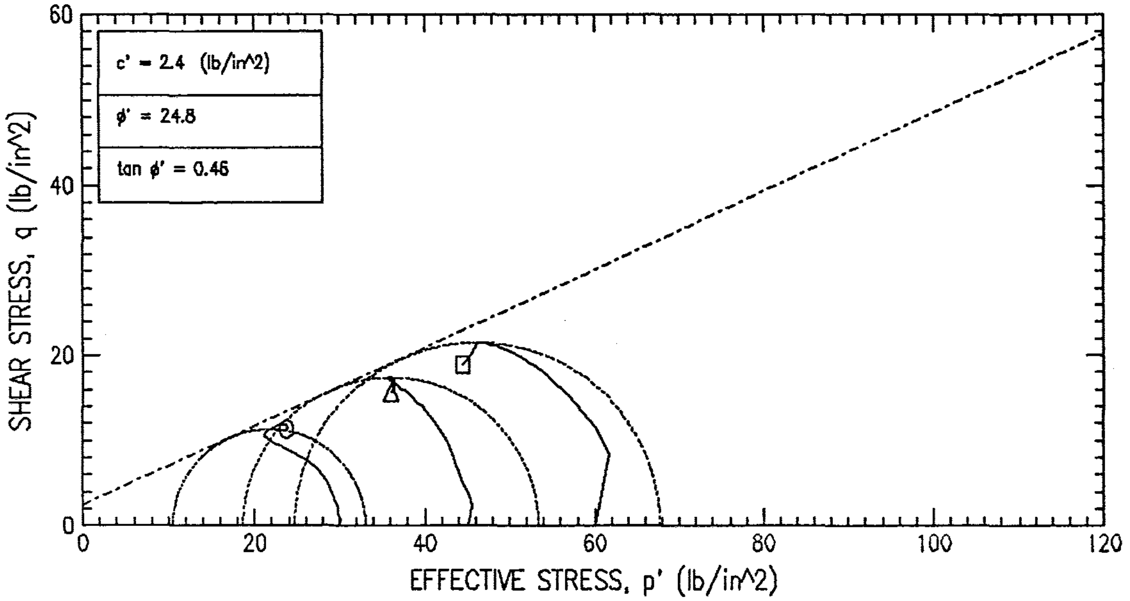
Boring No:	Sample No	Depth	Test No	Filename	Symbol
WB-4	3A	4-6.5 FEET	WB4-3A	WB4-3A.CIU	○
WB-4	3B	4-6.5 FEET	WB4-3B	WB4-3B.CIU	△
WB-4	3C	4-6.5 FEET	WB4-3C	WB4-3C.CIU	□



Project Name : LOWER GUADALUPE RIVER

Boring No:	Sample No	Depth	Test No	Filename	Symbol
WB-4	3A	4-6.5 FEET	WB4-3A	WB4-3A.CIU	○
WB-4	3B	4-6.5 FEET	WB4-3B	WB4-3B.CIU	△
WB-4	3C	4-6.5 FEET	WB4-3C	WB4-3C.CIU	□

UNDRAINED TRIAXIAL TEST

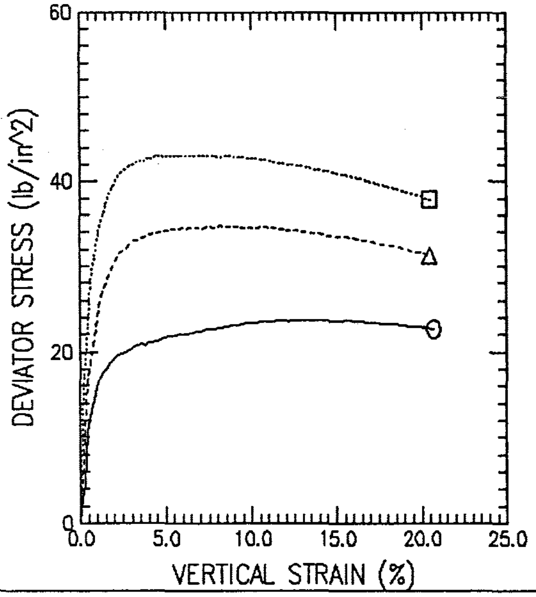


FAILURE SKETCHES

WB4-9A

WB4-9B

WB4-9C



SYMBOL		○	△	□	
TEST NO.		WB4-9A	WB4-9B	WB4-9C	
INITIAL	WATER CONTENT (%)	30.33	30.97	29.58	
	DRY DENSITY (lb/ft^3)	92.33	91.88	93.97	
	SATURATION (%)	97.15	98.18	98.48	
	VOID RATIO	0.859	0.868	0.826	
BEFORE SHEAR	WATER CONTENT (%)	25.26	27.72	25.84	
	DRY DENSITY (lb/ft^3)	101.34	97.44	100.38	
	SATURATION (%)	100.18	100.17	100.10	
	VOID RATIO	0.693	0.761	0.710	
	BACK PRESS. (lb/in^2)	80.00	80.00	80.00	
MINOR PRIN. STRESS (lb/in^2)		30.00	45.00	60.00	
MAX. DEV. STRESS (lb/in^2)		26.01	36.86	46.02	
TIME TO FAILURE (min)		887.38	564.38	446.30	
RATE OF STRAIN INCR (%/min)		0.00	0.00	0.00	
INITIAL DIAMETER (in)		2.86	2.86	2.86	
INITIAL HEIGHT (in)		5.98	5.98	5.98	
B-VALUE		0.99	0.99	0.99	

STRAIN CONTROLLED

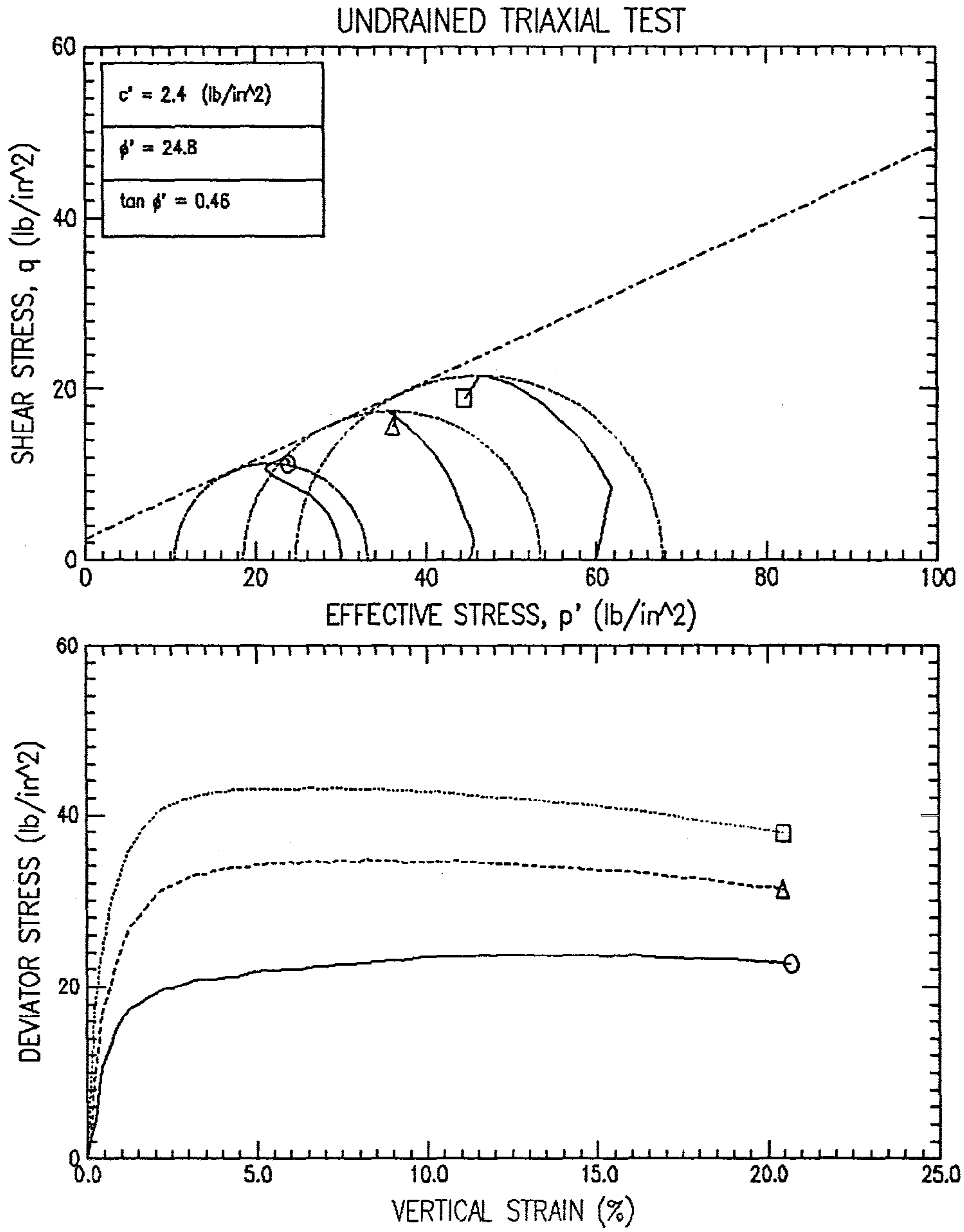
DESCRIPTION OF SPECIMENS:

1) MOTTLED GRAY BROWN SILTY CLAY 2) MOTTLED GRAY BROWN SILTY CLAY 3) MOTTLED GRAY BROWN SILTY CLAY

LL 41.25	PL 20.59	PI 20.66	GS 2.75	TYPE OF SPECIMEN SHELBY	TYPE OF TEST CU (R)

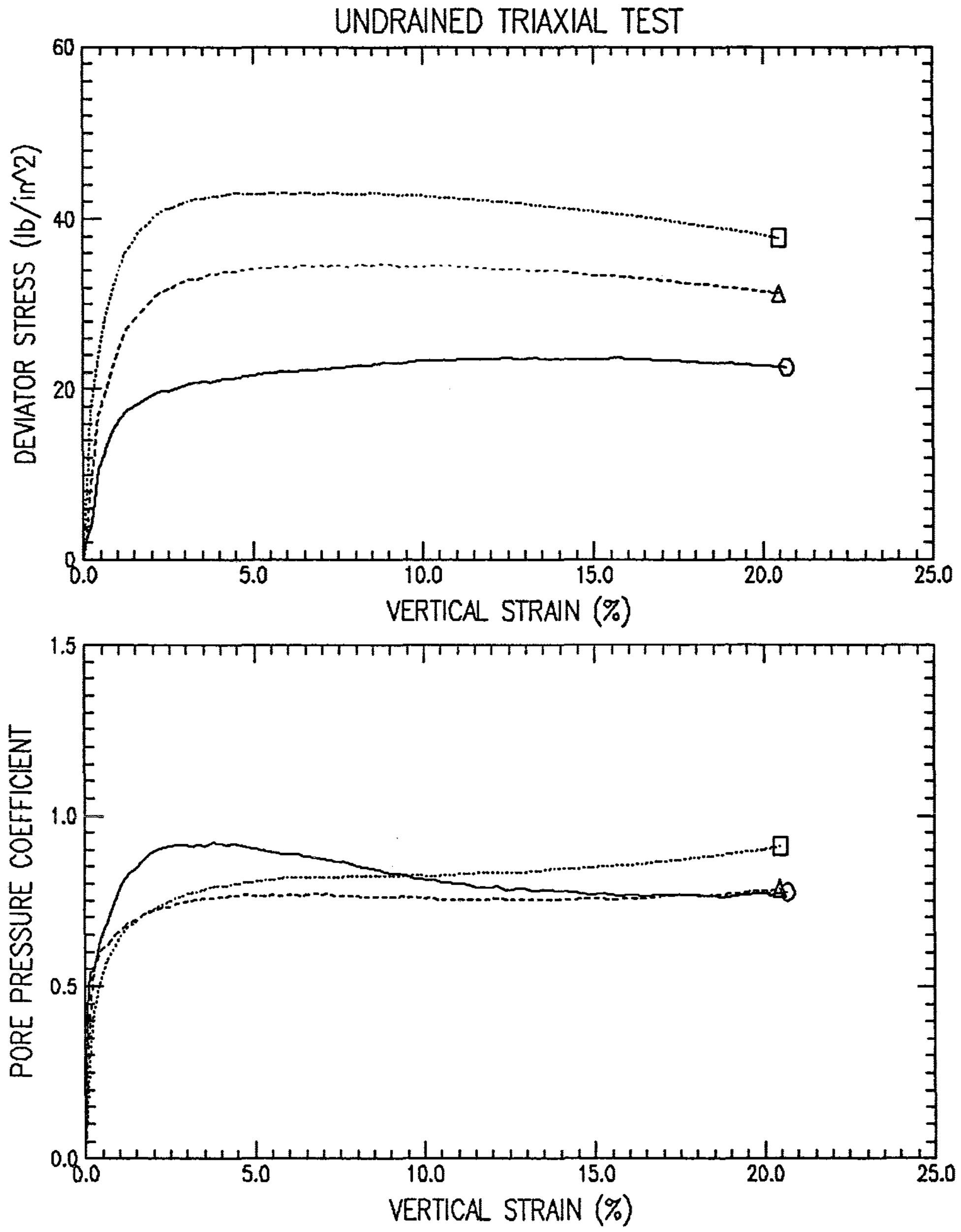
REMARKS:	PROJECT LOWER GUADALUPE RIVER				
1) TXCIU TEST WITH EFFECTIVE PRESSURE OF 30.0 PSI	PROJECT NO.973017NB				
2) TXCIU TEST WITH EFFECTIVE PRESSURE OF 45.0 PSI	BORING NO. WB4-9	SAMPLE NO.	9A	9B	9C
3) TXCIU TEST WITH EFFECTIVE PRESSURE OF 60.0 PSI	TECH. C. CAPPS	DEPTH/ELEV	30-32.5 FT	30-32.5 FT	30-32.5 FT
	LABORATORY	DATE	08/17/98	08/17/98	08/18/98
	TRIAXIAL COMPRESSION TEST REPORT				

Fri 08-21-98, 11:08:08



Project Name : LOWER GUADALUPE RIVER

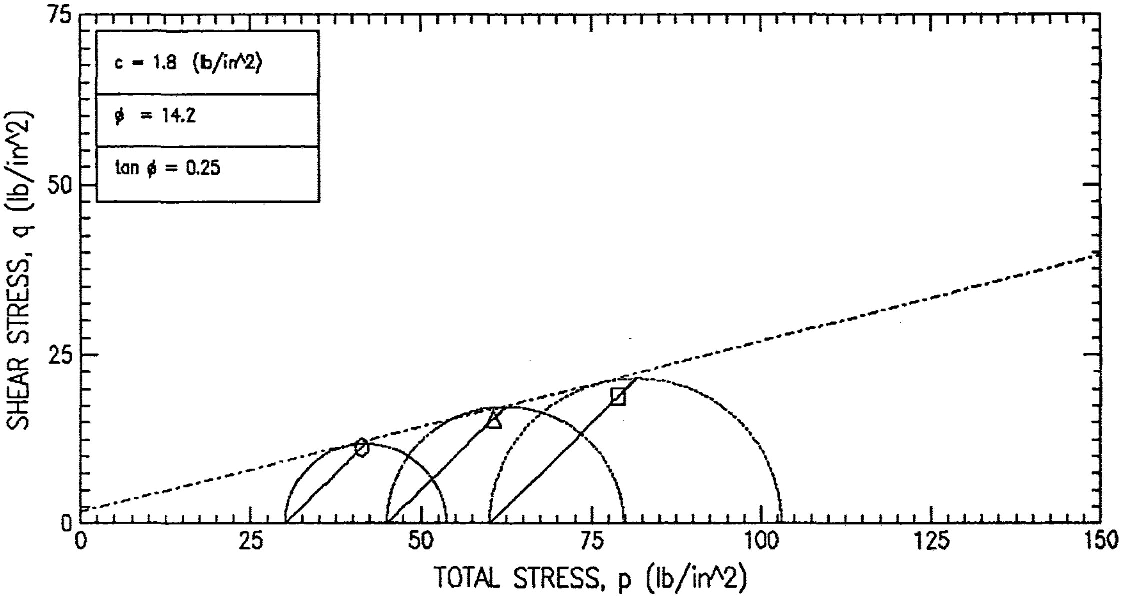
Boring No:	Sample No	Depth	Test No	Filename	Symbol
WB4-9	9A	30-32.5 FT	WB4-9A	WB4-9A.CIU	○
WB4-9	9B	30-32.5 FT	WB4-9B	WB4-9B.CIU	△
WB4-9	9C	30-32.5 FT	WB4-9C	WB4-9C.CIU	□



Project Name : LOWER GUADALUPE RIVER

Boring No:	Sample No	Depth	Test No	Filename	Symbol
WB4-9	9A	30-32.5 FT	WB4-9A	WB4-9A.CIU	○
WB4-9	9B	30-32.5 FT	WB4-9B	WB4-9B.CIU	△
WB4-9	9C	30-32.5 FT	WB4-9C	WB4-9C.CIU	□

UNDRAINED TRIAXIAL TEST

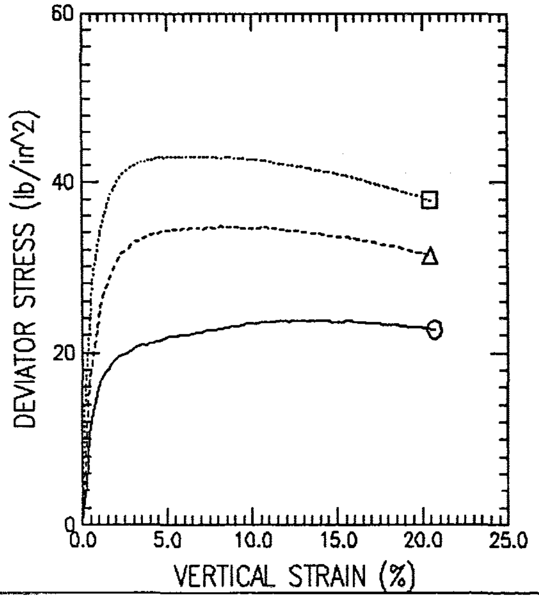


FAILURE SKETCHES

WB4-9A

WB4-9B

WB4-9C



SYMBOL		○	△	□	
TEST NO.		WB4-9A	WB4-9B	WB4-9C	
INITIAL	WATER CONTENT (%)	30.33	30.97	29.58	
	DRY DENSITY (lb/ft^3)	92.33	91.88	93.97	
	SATURATION (%)	97.15	98.18	98.48	
	VOID RATIO	0.859	0.868	0.826	
BEFORE SHEAR	WATER CONTENT (%)	25.26	27.72	25.84	
	DRY DENSITY (lb/ft^3)	101.34	97.44	100.36	
	SATURATION (%)	100.18	100.17	100.10	
	VOID RATIO	0.693	0.761	0.710	
	BACK PRESS. (lb/in^2)	80.00	80.00	80.00	
MINOR PRIN. STRESS (lb/in^2)		30.00	45.00	60.00	
MAX. DEV. STRESS (lb/in^2)		26.01	36.86	46.02	
TIME TO FAILURE (min)		887.38	564.38	446.30	
RATE OF STRAIN INCR (%/min)		0.00	0.00	0.00	
INITIAL DIAMETER (in)		2.86	2.86	2.86	
INITIAL HEIGHT (in)		5.98	5.98	5.98	
B-VALUE		0.99	0.99	0.99	

STRAIN CONTROLLED

DESCRIPTION OF SPECIMENS:

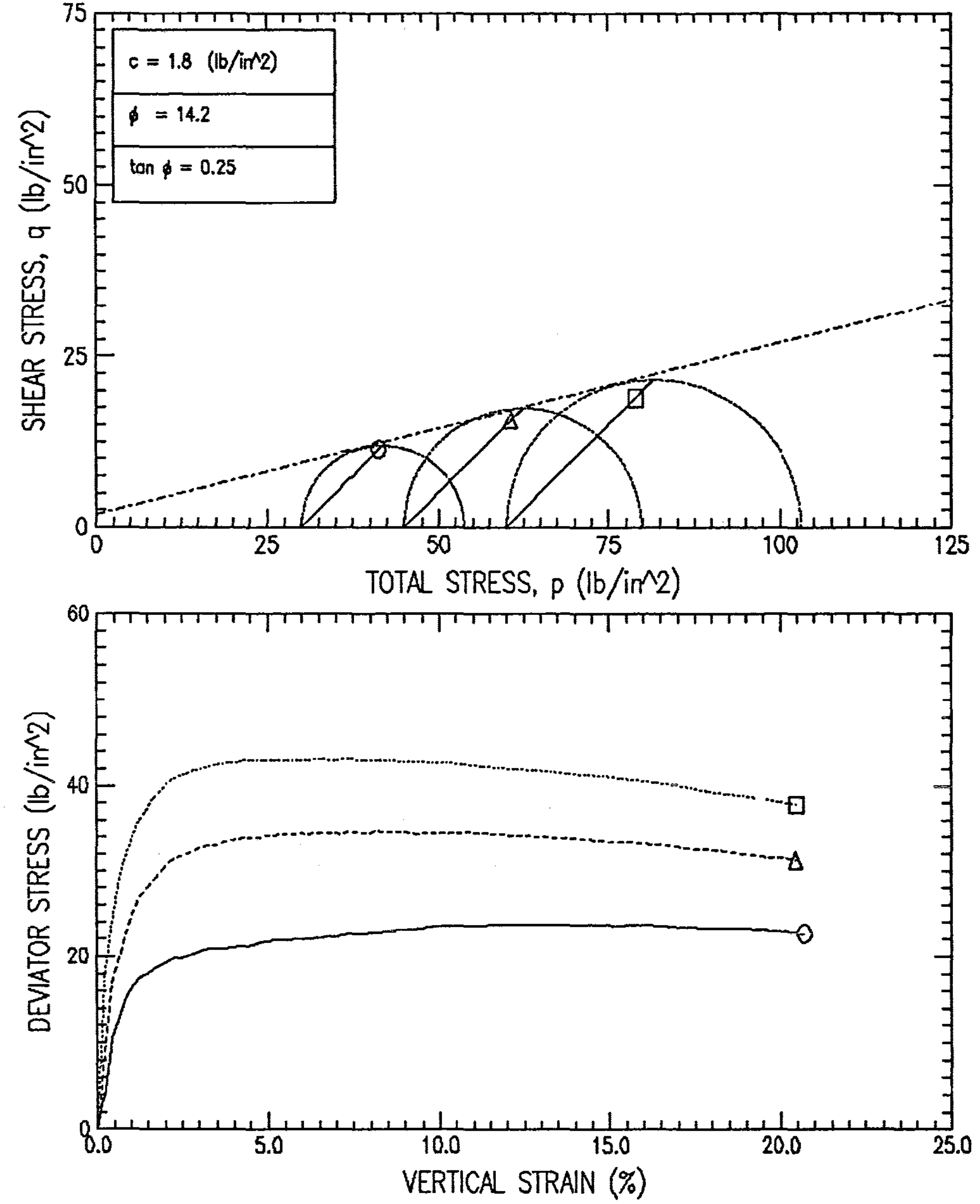
1) MOTTLED GRAY BROWN SILTY CLAY	2) MOTTLED GRAY BROWN SILTY CLAY	3) MOTTLED GRAY BROWN SILTY CLAY

LL 41.25	PL 20.59	PI 20.66	GS 2.75	TYPE OF SPECIMEN SHELBY	TYPE OF TEST CU (R)

REMARKS:	PROJECT LOWER GUADALUPE RIVER					
1) TXCIU TEST WITH EFFECTIVE PRESSURE OF 30.0 PSI	PROJECT NO.973017NB					
2) TXCIU TEST WITH EFFECTIVE PRESSURE OF 45.0 PSI	BORING NO. WB4-9	SAMPLE NO.	9A	9B	9C	
3) TXCIU TEST WITH EFFECTIVE PRESSURE OF 60.0 PSI	TECH. C. CAPPS	DEPTH/ELEV	30-32.5 FT	30-32.5 FT	30-32.5 FT	
	LABORATORY	DATE	08/17/98	08/17/98	08/18/98	
	TRIAXIAL COMPRESSION TEST REPORT					

Fri 08-21-98, 11:11:49

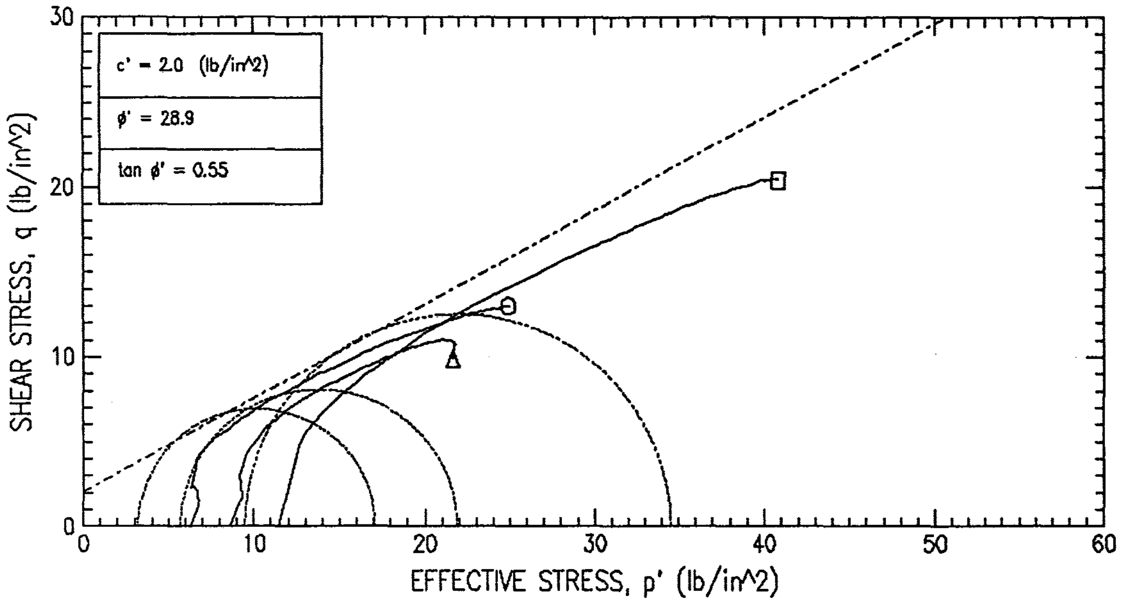
UNDRAINED TRIAXIAL TEST



Project Name : LOWER GUADALUPE RIVER

Boring No:	Sample No	Depth	Test No	Filename	Symbol
WB4-9	9A	30-32.5 FT	WB4-9A	WB4-9A.CIU	○
WB4-9	9B	30-32.5 FT	WB4-9B	WB4-9B.CIU	△
WB4-9	9C	30-32.5 FT	WB4-9C	WB4-9C.CIU	□

UNDRAINED TRIAXIAL TEST

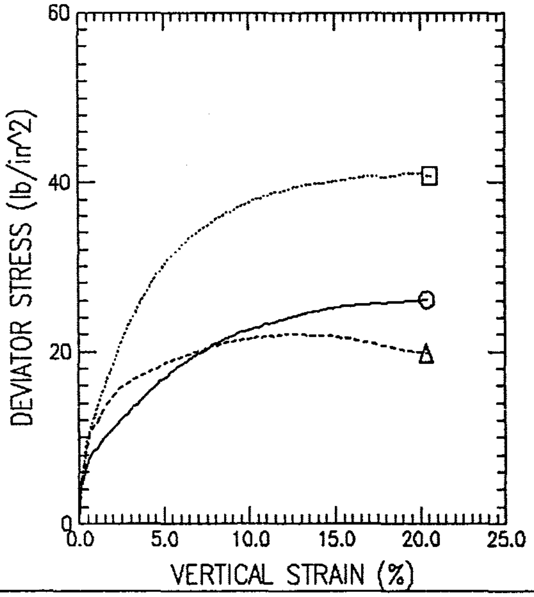


FAILURE SKETCHES

WB5-4A

WB5-4B

WB5-4C



SYMBOL		○	△	□	
TEST NO.		WB5-4A	WB5-4B	WB5-4C	
INITIAL	WATER CONTENT (%)	11.65	13.19	14.56	
	DRY DENSITY (lb/ft^3)	116.60	114.36	118.80	
	SATURATION (%)	66.41	70.96	87.98	
	VOID RATIO	0.488	0.517	0.460	
BEFORE SHEAR	WATER CONTENT (%)	16.51	18.21	16.30	
	DRY DENSITY (lb/ft^3)	118.96	115.22	119.45	
	SATURATION (%)	100.14	100.14	100.20	
	VOID RATIO	0.458	0.506	0.452	
	BACK PRESS. (lb/in^2)	80.00	80.00	80.00	
MINOR PRIN. STRESS (lb/in^2)		6.30	8.60	11.40	
MAX. DEV. STRESS (lb/in^2)		26.57	22.22	41.27	
TIME TO FAILURE (min)		1349.58	814.78	1284.43	
RATE OF STRAIN INCR (%/min)		0.00	0.00	0.00	
INITIAL DIAMETER (in)		2.86	2.86	2.86	
INITIAL HEIGHT (in)		5.98	5.98	5.98	
B-VALUE		0.98	0.98	0.98	

STRAIN CONTROLLED

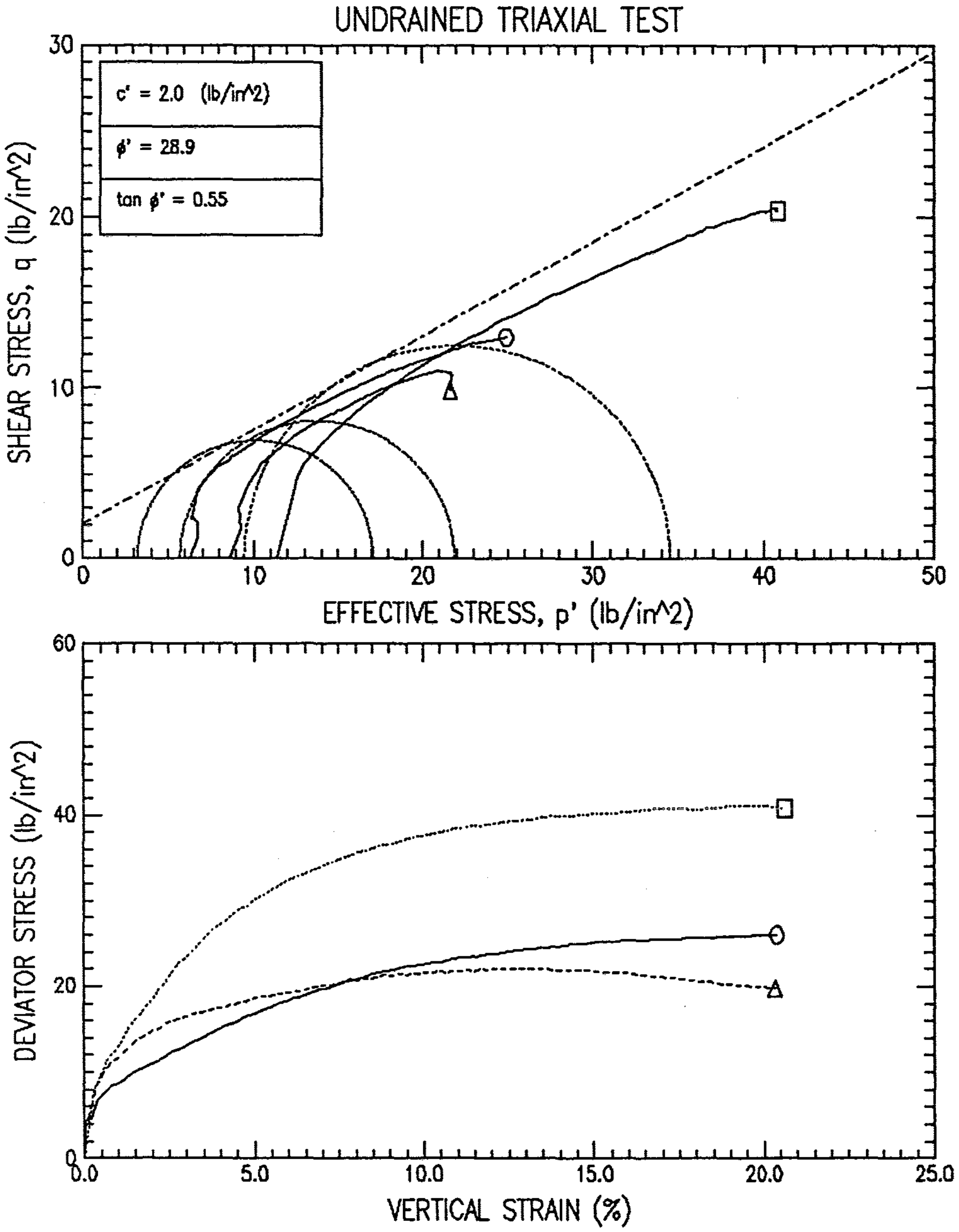
DESCRIPTION OF SPECIMENS:

1) BROWN SANDY SILTY CLAY WITH GRAVEL 2) BROWN SANDY SILTY CLAY WITH GRAVEL 3) BROWN SANDY SILTY CLAY WITH GRAVEL

LL 26.37	PL 15.96	PI 10.41	GS 2.78	TYPE OF SPECIMEN SHELBY		TYPE OF TEST CU (R)	
REMARKS:				PROJECT LOWER GUADALUPE RIVER			
1) TXCIU TEST WITH EFFECTIVE PRESSURE OF 6.3 PSI				PROJECT NO.973017NB			
2) TXCIU TEST WITH EFFECTIVE PRESSURE OF 8.6 PSI				BORING NO. WB-5	SAMPLE NO.	4A	4B	4C
3) TXCIU TEST WITH EFFECTIVE PRESSURE OF 11.4 PSI				TECH. C. CAPPS	DEPTH/ELEV	5.5-7.7 FT	5.5-7.7 FT	5.5-7.7 FT
				LABORATORY	DATE	07/15/98	07/15/98	07/15/98

TRIAXIAL COMPRESSION TEST REPORT

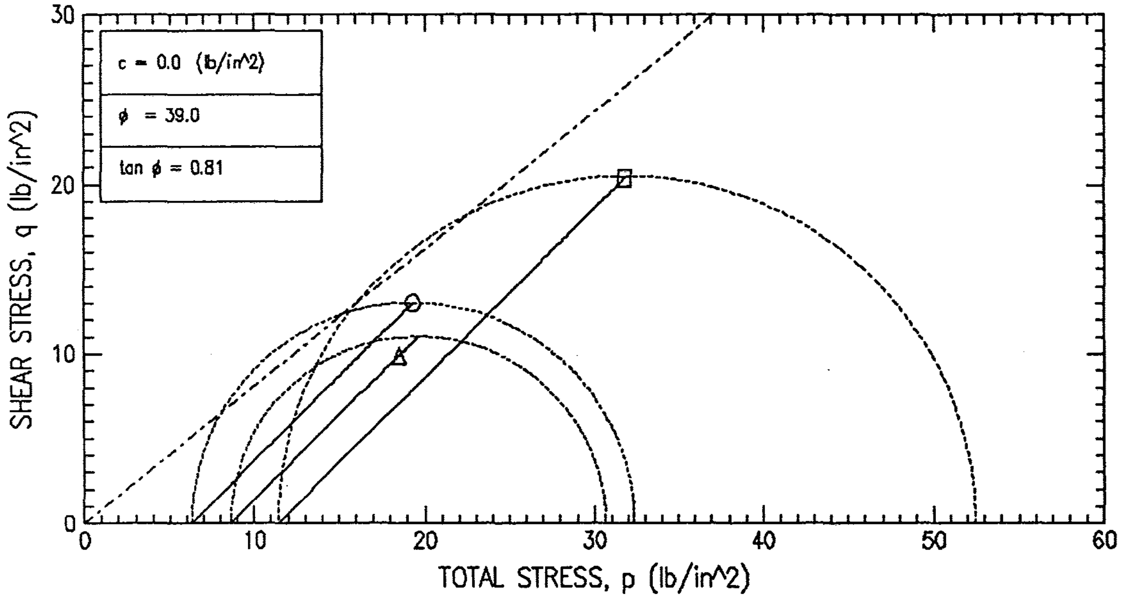
Fri 07-17-98, 11:33:24



Project Name : LOWER GUADALUPE RIVER

Boring No:	Sample No	Depth	Test No	Filename	Symbol
WB-5	4A	5.5-7.7 FT	WB5-4A	WB5-4A.CIU	○
WB-5	4B	5.5-7.7 FT	WB5-4B	WB5-4B.CIU	△
WB-5	4C	5.5-7.7 FT	WB5-4C	WB5-4C.CIU	□

UNDRAINED TRIAXIAL TEST

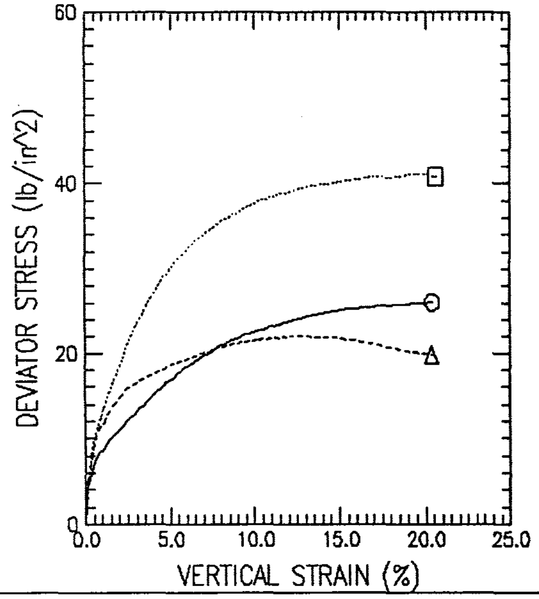


FAILURE SKETCHES

WB5-4A

WB5-4B

WB5-4C



SYMBOL		○	△	□	
TEST NO.		WB5-4A	WB5-4B	WB5-4C	
INITIAL	WATER CONTENT (%)	11.65	13.19	14.56	
	DRY DENSITY (lb/ft^3)	116.60	114.36	118.80	
	SATURATION (%)	66.41	70.96	87.98	
	VOID RATIO	0.488	0.517	0.460	
BEFORE SHEAR	WATER CONTENT (%)	16.51	18.21	16.30	
	DRY DENSITY (lb/ft^3)	118.96	115.22	119.45	
	SATURATION (%)	100.14	100.14	100.20	
	VOID RATIO	0.458	0.506	0.452	
	BACK PRESS. (lb/in^2)	80.00	80.00	80.00	
MINOR PRIN. STRESS (lb/in^2)		6.30	8.60	11.40	
MAX. DEV. STRESS (lb/in^2)		26.57	22.22	41.27	
TIME TO FAILURE (min)		1349.58	814.78	1284.43	
RATE OF STRAIN INCR (%/min)		0.00	0.00	0.00	
INITIAL DIAMETER (in)		2.86	2.86	2.86	
INITIAL HEIGHT (in)		5.98	5.98	5.98	
B-VALUE		0.98	0.98	0.98	

STRAIN CONTROLLED

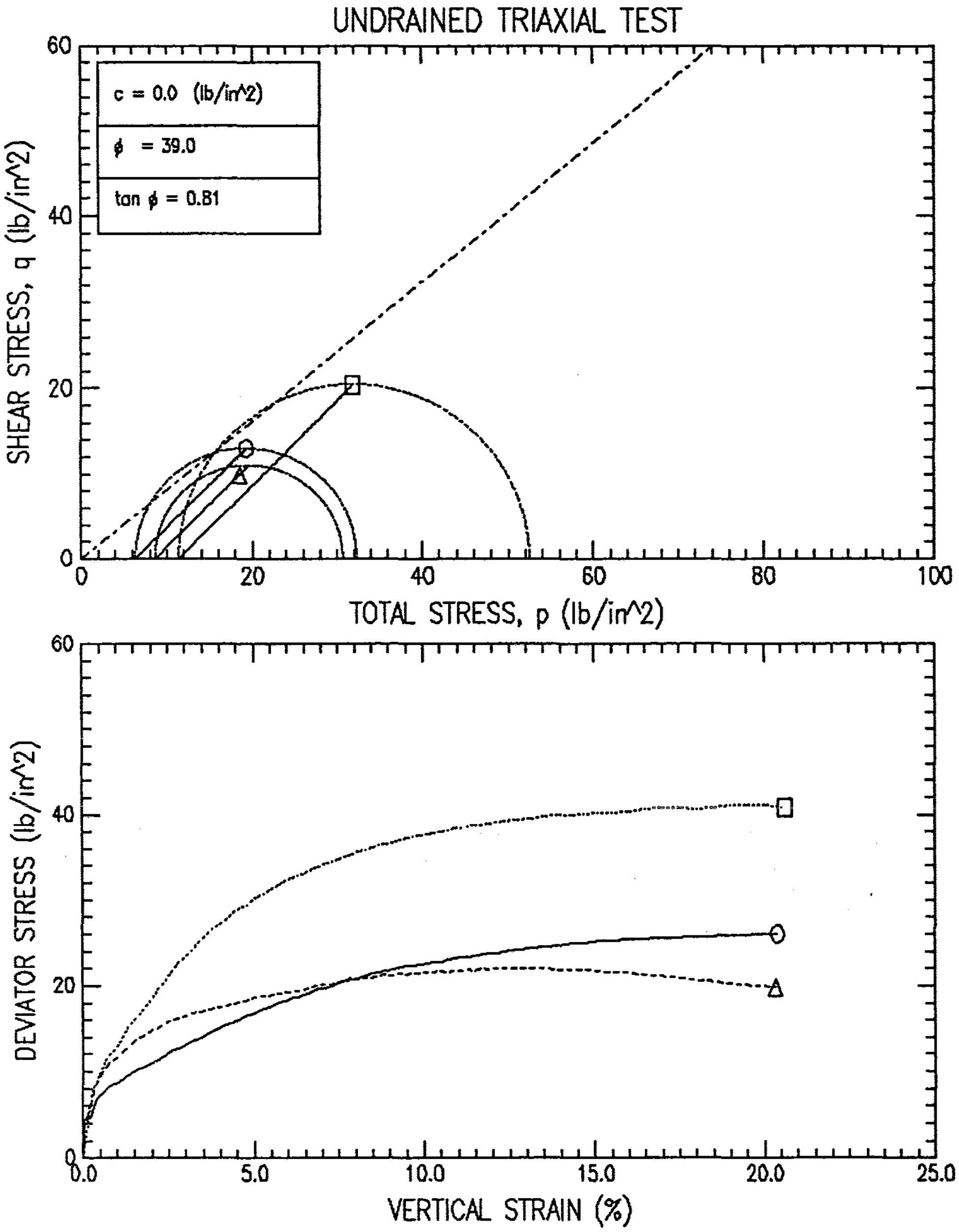
DESCRIPTION OF SPECIMENS:

1) BROWN SANDY SILTY CLAY WITH GRAVEL 2) BROWN SANDY SILTY CLAY WITH GRAVEL 3) BROWN SANDY SILTY CLAY WITH GRAVEL

LL 26.37	PL 15.96	PI 10.41	GS 2.78	TYPE OF SPECIMEN SHELBY	TYPE OF TEST CU (R)

REMARKS:	PROJECT LOWER GUADALUPE RIVER				
1) TXCIU TEST WITH EFFECTIVE PRESSURE OF 6.3 PSI	PROJECT NO.973017NB				
2) TXCIU TEST WITH EFFECTIVE PRESSURE OF 8.6 PSI	BORING NO. WB-5	SAMPLE NO.	4A	4B	4C
3) TXCIU TEST WITH EFFECTIVE PRESSURE OF 11.4 PSI	TECH. C. CAPPS	DEPTH/ELEV	5.5-7.7 FT	5.5-7.7 FT	5.5-7.7 FT
	LABORATORY	DATE	07/15/98	07/15/98	07/15/98
	TRIAXIAL COMPRESSION TEST REPORT				

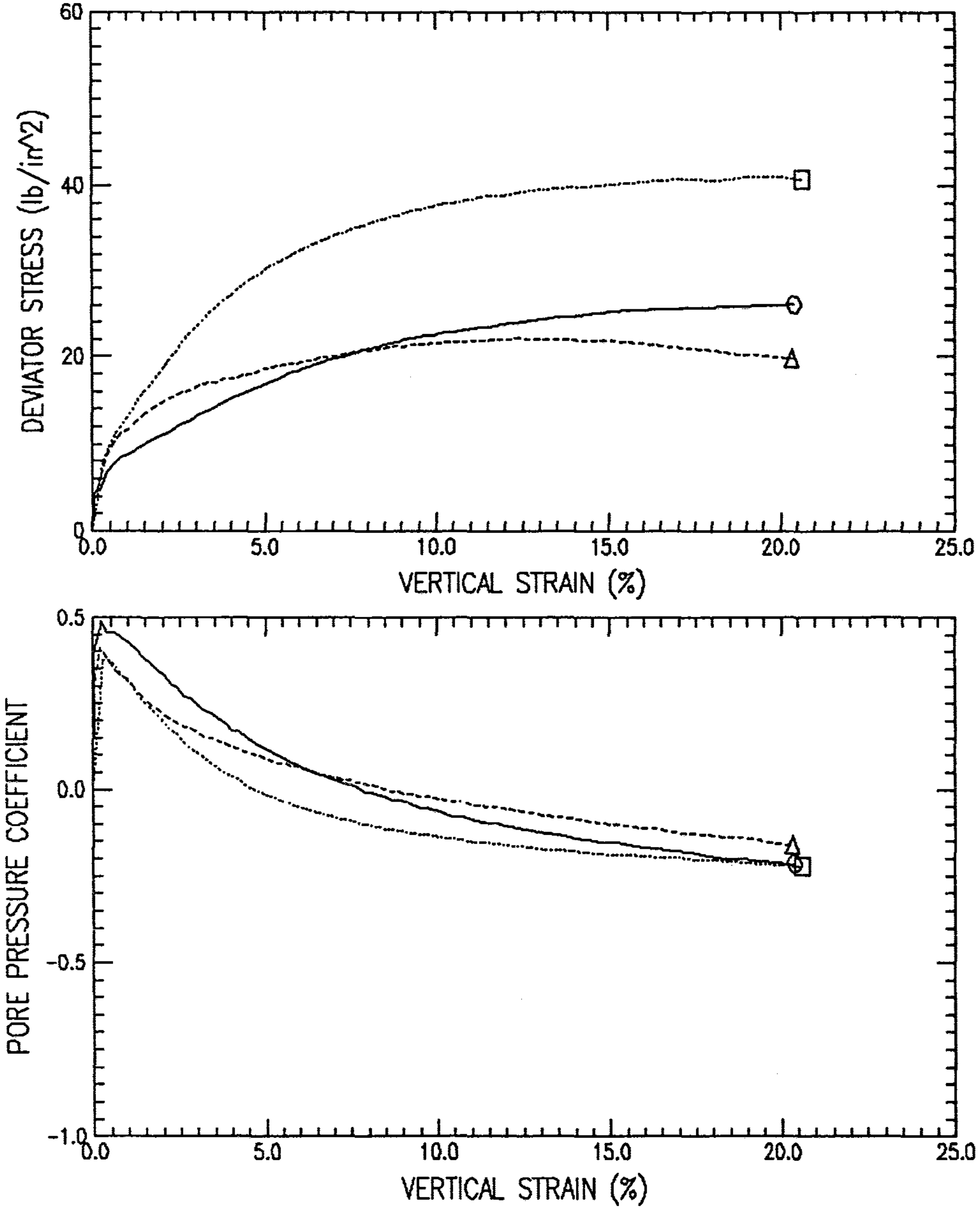
Fri 07-17-98, 11:36:28



Project Name : LOWER GUADALUPE RIVER

Boring No:	Sample No	Depth	Test No	Filename	Symbol
WB-5	4A	5.5-7.7 FT	WB5-4A	WB5-4A.CIU	○
WB-5	4B	5.5-7.7 FT	WB5-4B	WB5-4B.CIU	△
WB-5	4C	5.5-7.7 FT	WB5-4C	WB5-4C.CIU	□

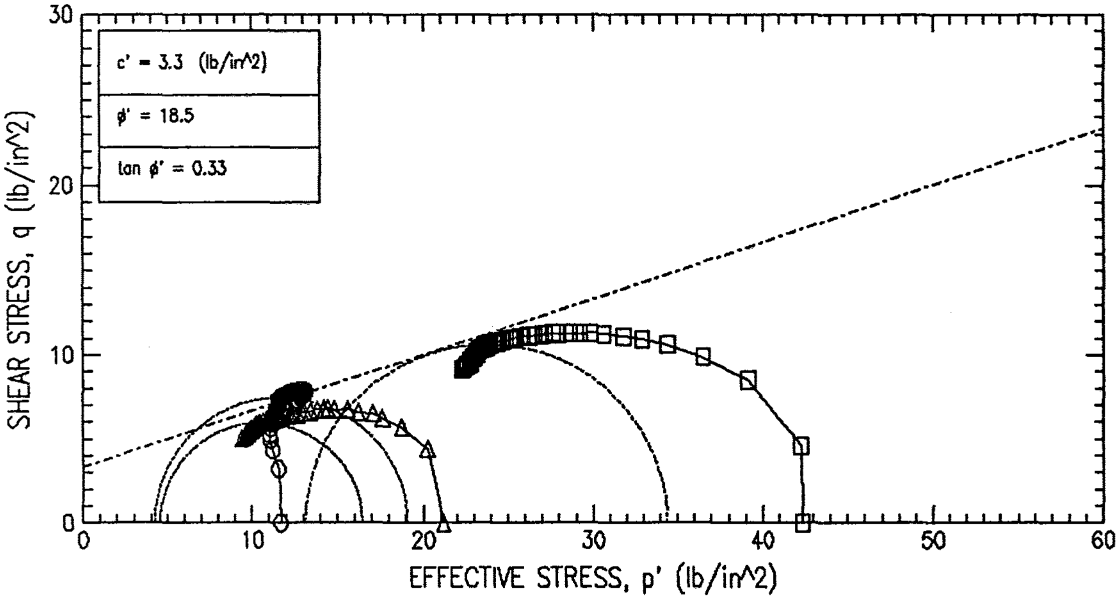
UNDRAINED TRIAXIAL TEST



Project Name : LOWER GUADALUPE RIVER

Boring No:	Sample No	Depth	Test No	Filename	Symbol
WB-5	4A	5.5-7.7 FT	WB5-4A	WB5-4A.CIU	O
WB-5	4B	5.5-7.7 FT	WB5-4B	WB5-4B.CIU	Δ
WB-5	4C	5.5-7.7 FT	WB5-4C	WB5-4C.CIU	☐

UNDRAINED TRIAXIAL TEST

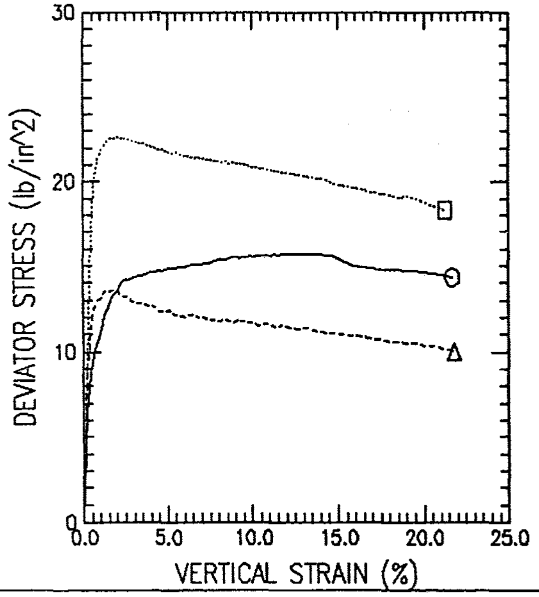


FAILURE SKETCHES

WB8-7A

WB8-7B

WB8-7C



SYMBOL		○	△	□	
TEST NO.		WB8-7A	WB8-7B	WB8-7C	
INITIAL	WATER CONTENT (%)	26.91	29.09	29.24	
	DRY DENSITY (lb/ft^3)	91.89	83.79	84.48	
	SATURATION (%)	90.46	80.13	81.91	
	VOID RATIO	0.779	0.951	0.935	
BEFORE SHEAR	WATER CONTENT (%)	27.37	32.95	30.97	
	DRY DENSITY (lb/ft^3)	95.25	87.82	90.30	
	SATURATION (%)	100.10	100.18	100.09	
	VOID RATIO	0.716	0.862	0.811	
	BACK PRESS. (lb/in^2)	80.00	80.00	80.00	
MINOR PRIN. STRESS (lb/in^2)		11.70	21.20	42.40	
MAX. DEV. STRESS (lb/in^2)		16.24	14.24	24.21	
TIME TO FAILURE (min)		819.33	117.33	118.20	
RATE OF STRAIN INCR (%/min)		0.00	0.00	0.00	
INITIAL DIAMETER (in)		2.86	2.86	2.86	
INITIAL HEIGHT (in)		5.98	5.98	5.98	
B-VALUE		0.98	0.98	0.98	

STRAIN CONTROLLED

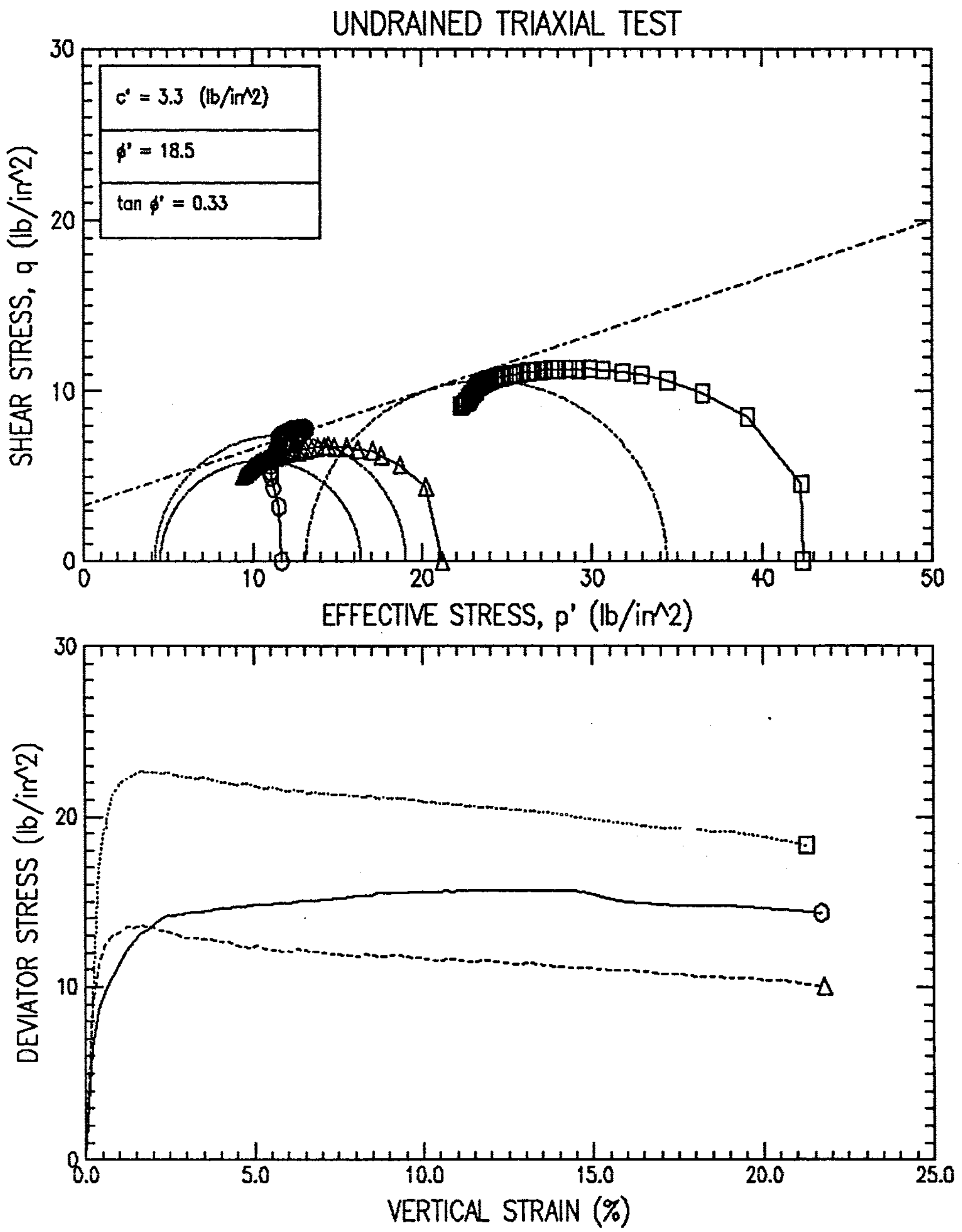
DESCRIPTION OF SPECIMENS:

1) BROWN SI-CLAY TO CLAYEY SILT 2) BROWN SI-CLAY TO CLAYEY SILT 3) BROWN SI-CLAY TO CLAYEY SILT

LL 36.16	PL 23.29	PI 12.87	GS 2.62	TYPE OF SPECIMEN SHELBY	TYPE OF TEST CU (R)

REMARKS:	PROJECT LOWER GUADALUPE RIVER				
1) TXCIU TEST WITH EFFECTIVE PRESSURE OF 11.7 PSI	PROJECT NO.973017NB				
2) TXCIU TEST WITH EFFECTIVE PRESSURE OF 21.2 PSI	BORING NO. WB-8	SAMPLE NO.	7A	7B	7C
3) TXCIU TEST WITH EFFECTIVE PRESSURE OF 42.4 PSI	TECH. C. WASON	DEPTH/ELEV	11-15.5 FT	11-13.5 FT	11-13.5 FT
	LABORATORY	DATE	08/12/98	08/12/98	08/12/98
	TRIAXIAL COMPRESSION TEST REPORT				

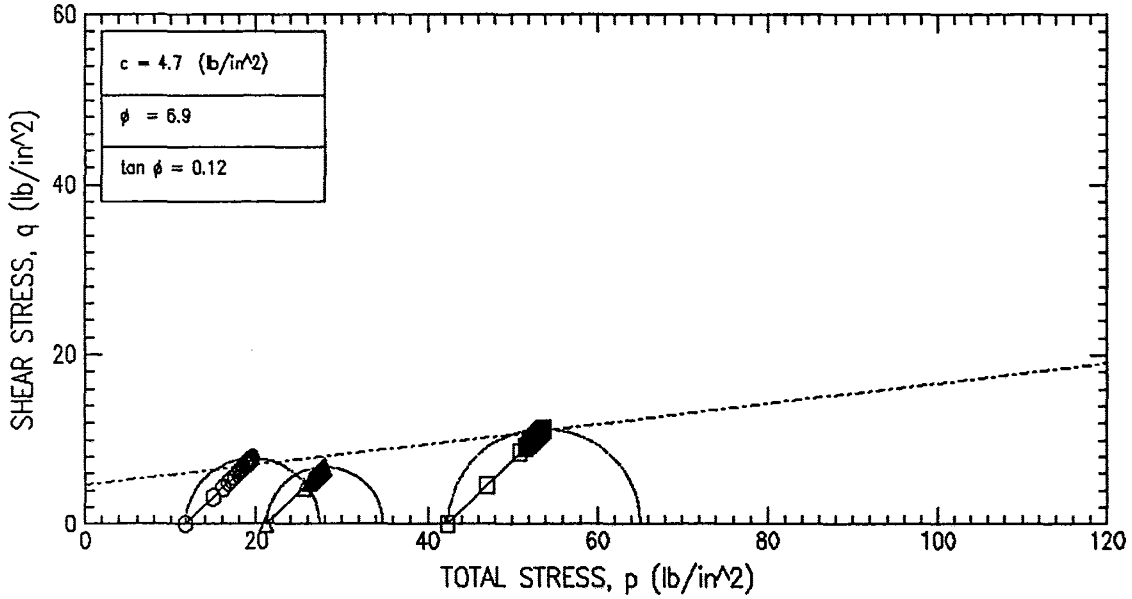
Fri 08-14-98, 14:22:53



Project Name : LOWER GUADALUPE RIVER

Boring No:	Sample No	Depth	Test No	Filename	Symbol
WB-8	7A	11-15.5 FT	WB8-7A	WB8-7A.CIU	○
WB-8	7B	11-13.5 FT	WB8-7B	WB8-7B.CIU	△
WB-8	7C	11-13.5 FT	WB8-7C	WB8-7C.CIU	□

UNDRAINED TRIAXIAL TEST

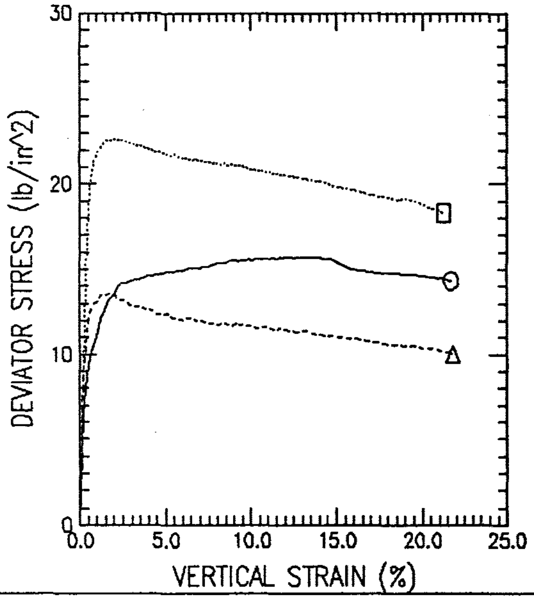


FAILURE SKETCHES

WB8-7A

WB8-7B

WB8-7C



SYMBOL		○	△	□	
TEST NO.		WB8-7A	WB8-7B	WB8-7C	
INITIAL	WATER CONTENT (%)	26.91	29.09	29.24	
	DRY DENSITY (lb/ft^3)	91.89	83.79	84.48	
	SATURATION (%)	90.46	80.13	81.91	
	VOID RATIO	0.779	0.951	0.935	
BEFORE SHEAR	WATER CONTENT (%)	27.37	32.95	30.97	
	DRY DENSITY (lb/ft^3)	95.25	87.82	90.30	
	SATURATION (%)	100.10	100.18	100.09	
	VOID RATIO	0.716	0.862	0.811	
	BACK PRESS. (lb/in^2)	80.00	80.00	80.00	
MINOR PRIN. STRESS (lb/in^2)		11.70	21.20	42.40	
MAX. DEV. STRESS (lb/in^2)		16.24	14.24	24.21	
TIME TO FAILURE (min)		819.33	117.33	118.20	
RATE OF STRAIN INCR (%/min)		0.00	0.00	0.00	
INITIAL DIAMETER (in)		2.86	2.86	2.86	
INITIAL HEIGHT (in)		5.98	5.98	5.98	
B-VALUE		0.98	0.98	0.98	

STRAIN CONTROLLED

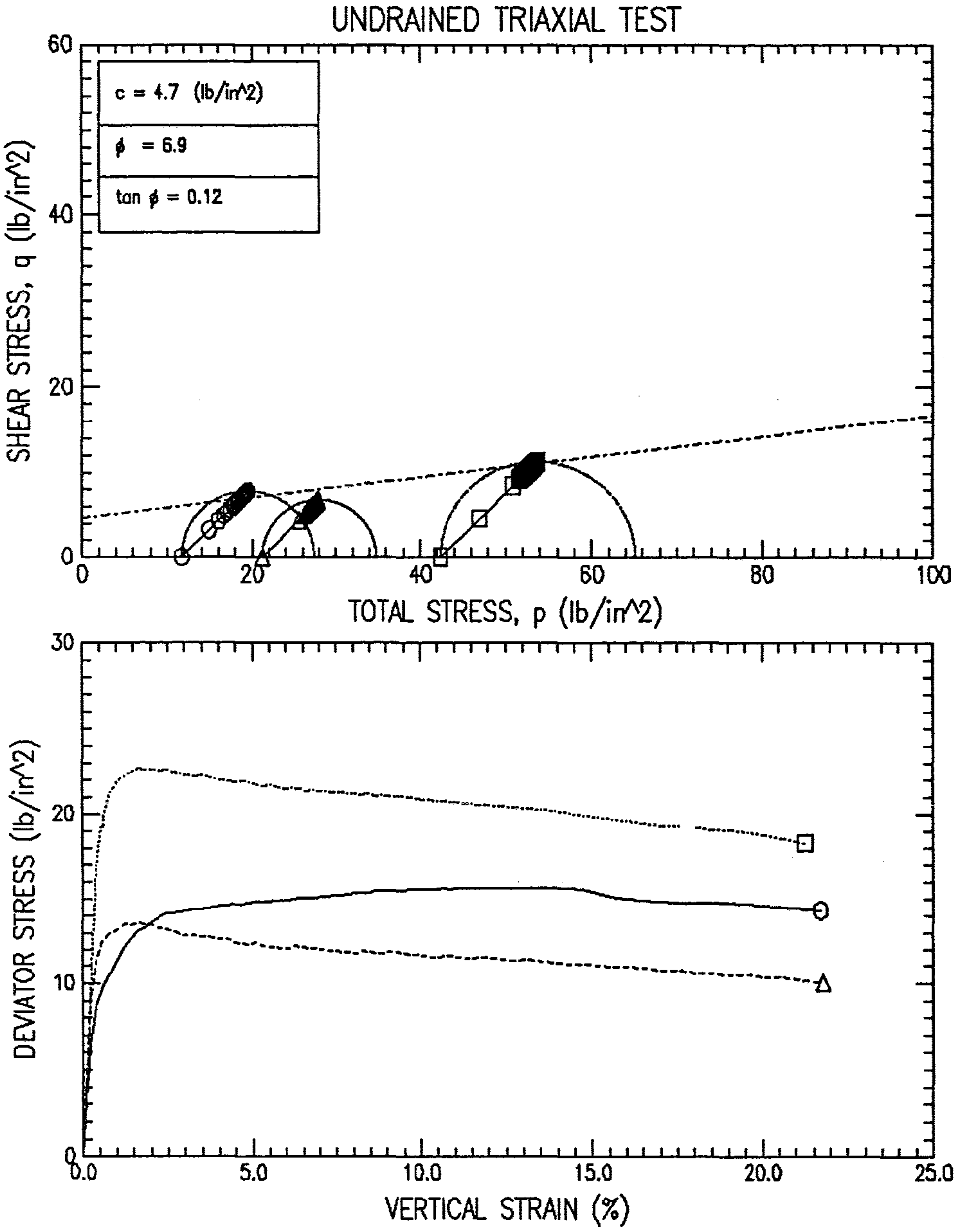
DESCRIPTION OF SPECIMENS:

1) BROWN SI-CLAY TO CLAYEY SILT 2) BROWN SI-CLAY TO CLAYEY SILT 3) BROWN SI-CLAY TO CLAYEY SILT

LL 36.16	PL 23.29	PI 12.87	GS 2.62	TYPE OF SPECIMEN SHELBY	TYPE OF TEST CU (R)

REMARKS:	PROJECT LOWER GUADALUPE RIVER				
1) TXCIU TEST WITH EFFECTIVE PRESSURE OF 11.7 PSI	PROJECT NO.973017NB				
2) TXCIU TEST WITH EFFECTIVE PRESSURE OF 21.2 PSI	BORING NO. WB-8	SAMPLE NO.	7A	7B	7C
3) TXCIU TEST WITH EFFECTIVE PRESSURE OF 42.4 PSI	TECH. C. WASON	DEPTH/ELEV	11-15.5 FT	11-13.5 FT	11-13.5 FT
	LABORATORY	DATE	08/12/98	08/12/98	08/12/98
	TRIAXIAL COMPRESSION TEST REPORT				

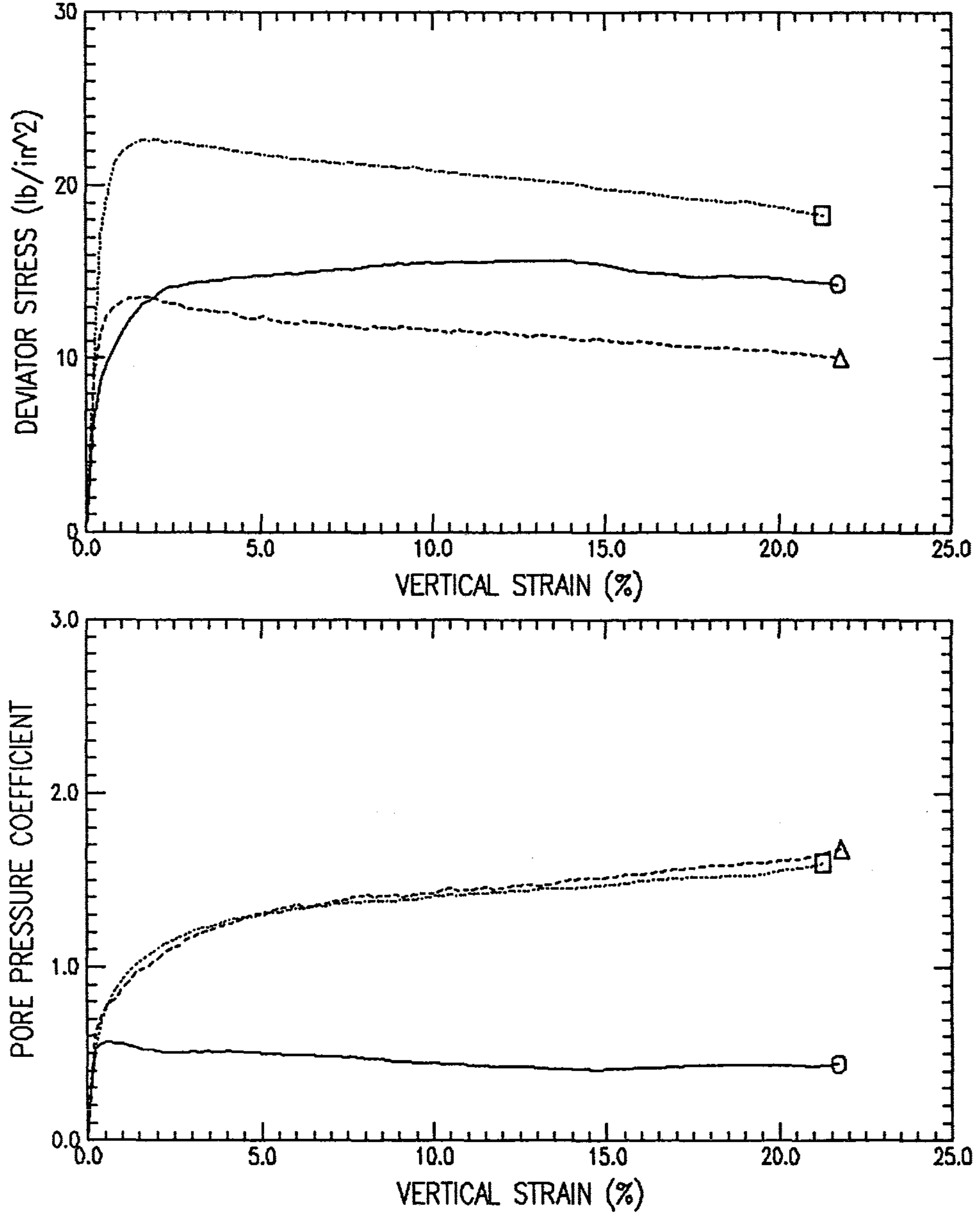
Fri 08-14-98, 14:24:39



Project Name : LOWER GUADALUPE RIVER

Boring No:	Sample No	Depth	Test No	Filename	Symbol
WB-8	7A	11-15.5 FT	WB8-7A	WB8-7A.CIU	○
WB-8	7B	11-13.5 FT	WB8-7B	WB8-7B.CIU	△
WB-8	7C	11-13.5 FT	WB8-7C	WB8-7C.CIU	□

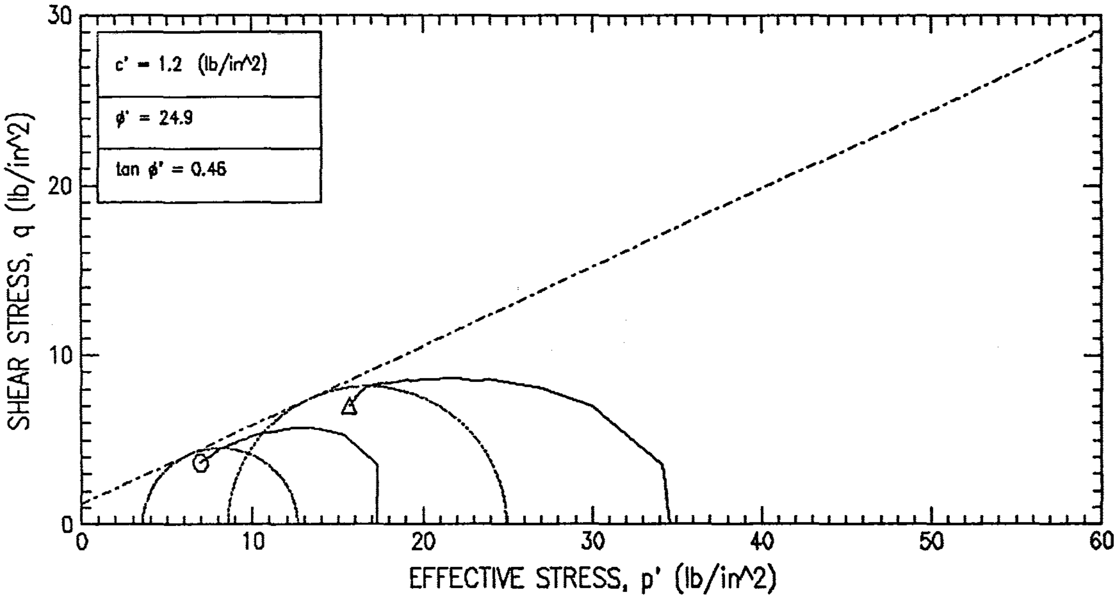
UNDRAINED TRIAXIAL TEST



Project Name : LOWER GUADALUPE RIVER

Boring No:	Sample No	Depth	Test No	Filename	Symbol
WB-8	7A	11-15.5 FT	WB8-7A	WB8-7A.CIU	○
WB-8	7B	11-13.5 FT	WB8-7B	WB8-7B.CIU	△
WB-8	7C	11-13.5 FT	WB8-7C	WB8-7C.CIU	□

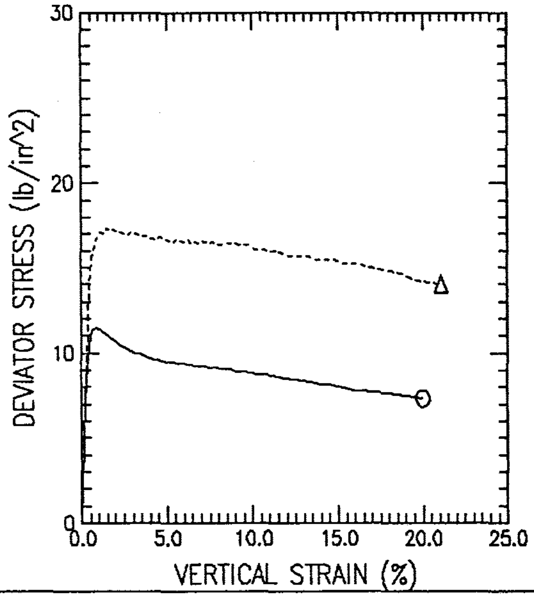
UNDRAINED TRIAXIAL TEST



FAILURE SKETCHES

WB8-12B

WB8-12C



SYMBOL		○	△		
TEST NO.		WB8-12B	WB8-12C		
INITIAL	WATER CONTENT (%)	28.98	28.58		
	DRY DENSITY (lb/ft^3)	94.14	95.30		
	SATURATION (%)	96.84	98.18		
	VOID RATIO	0.823	0.801		
BEFORE SHEAR	WATER CONTENT (%)	27.89	22.61		
	DRY DENSITY (lb/ft^3)	97.08	105.80		
	SATURATION (%)	99.92	99.96		
	VOID RATIO	0.768	0.622		
	BACK PRESS. (lb/in^2)	80.00	80.00		
MINOR PRIN. STRESS (lb/in^2)		17.30	34.60		
MAX. DEV. STRESS (lb/in^2)		11.81	19.24		
TIME TO FAILURE (min)		53.77	99.57		
RATE OF STRAIN INCR (%/min)		0.00	0.00		
INITIAL DIAMETER (in)		2.86	2.86		
INITIAL HEIGHT (in)		5.98	5.98		
B-VALUE		98.90	99.30		

STRAIN CONTROLLED

DESCRIPTION OF SPECIMENS:

1) DARK GRAY CLAYEY SILTY SAND/SANDY CLAY

2) DARK GRAY CLAYEY SILTY SAND/SANDY CLAY

LL 33.81	PL 16.01	PI 17.80	GS 2.75	TYPE OF SPECIMEN SHELBY	TYPE OF TEST CU (R)

REMARKS:

1) TXCIU TEST WITH EFFECTIVE PRESSURE OF 17.3 PSI

2) TXCIU TEST WITH EFFECTIVE PRESSURE OF 34.6 PSI

PROJECT LOWER GUADALUPE RIVER

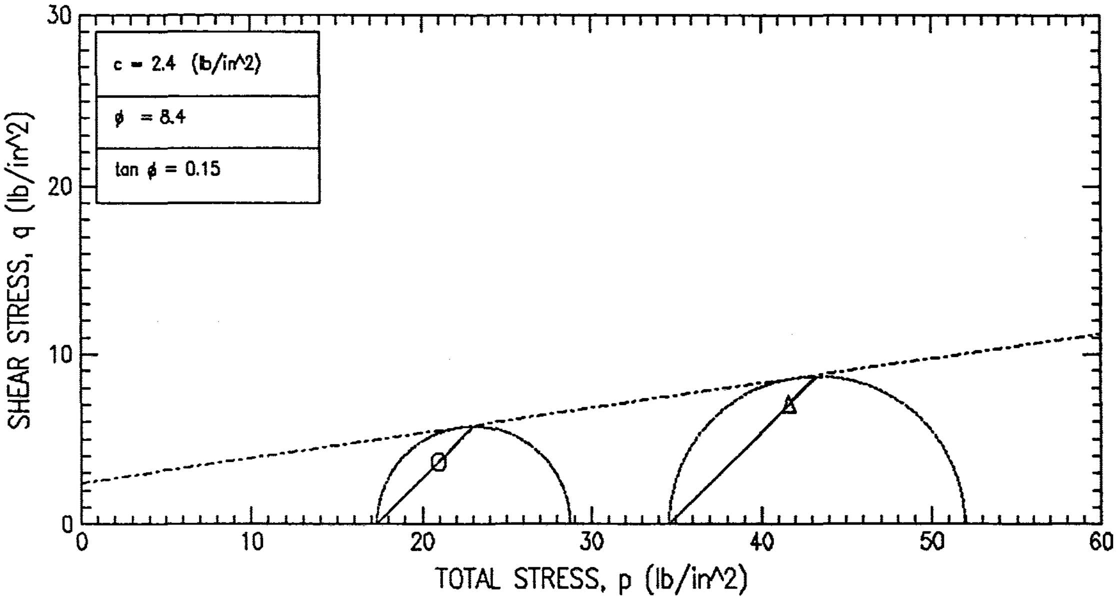
PROJECT NO.973017NB

BORING NO. WB-8	SAMPLE NO.	12B	12C		
TECH. C. CAPPS	DEPTH/ELEV	22.5-25 FT	22.5-25 FT		
LABORATORY	DATE	07/27/98	07/27/98		

TRIAXIAL COMPRESSION TEST REPORT

Thu 07-30-98, 10:58:07

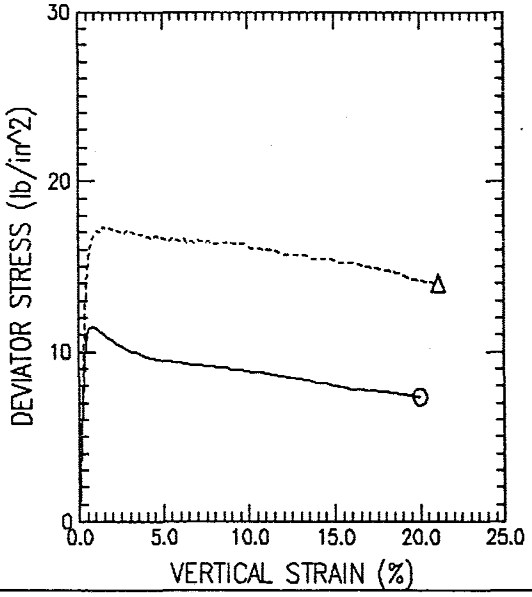
UNDRAINED TRIAXIAL TEST



FAILURE SKETCHES

WB8-12B

WB8-12C



	SYMBOL	O	Δ		
	TEST NO.	WB8-12B	WB8-12C		
INITIAL	WATER CONTENT (%)	28.98	28.58		
	DRY DENSITY (lb/ft^3)	94.14	95.30		
	SATURATION (%)	96.84	98.18		
	VOID RATIO	0.823	0.801		
BEFORE SHEAR	WATER CONTENT (%)	27.89	22.61		
	DRY DENSITY (lb/ft^3)	97.08	105.80		
	SATURATION (%)	99.92	99.96		
	VOID RATIO	0.768	0.622		
	BACK PRESS. (lb/in^2)	80.00	80.00		
	MINOR PRIN. STRESS (lb/in^2)	17.30	34.60		
	MAX. DEV. STRESS (lb/in^2)	11.81	19.24		
	TIME TO FAILURE (min)	53.77	99.57		
	RATE OF STRAIN INCR (%/min)	0.00	0.00		
	INITIAL DIAMETER (in)	2.86	2.86		
	INITIAL HEIGHT (in)	5.98	5.98		
	B-VALUE	98.90	99.30		

STRAIN CONTROLLED

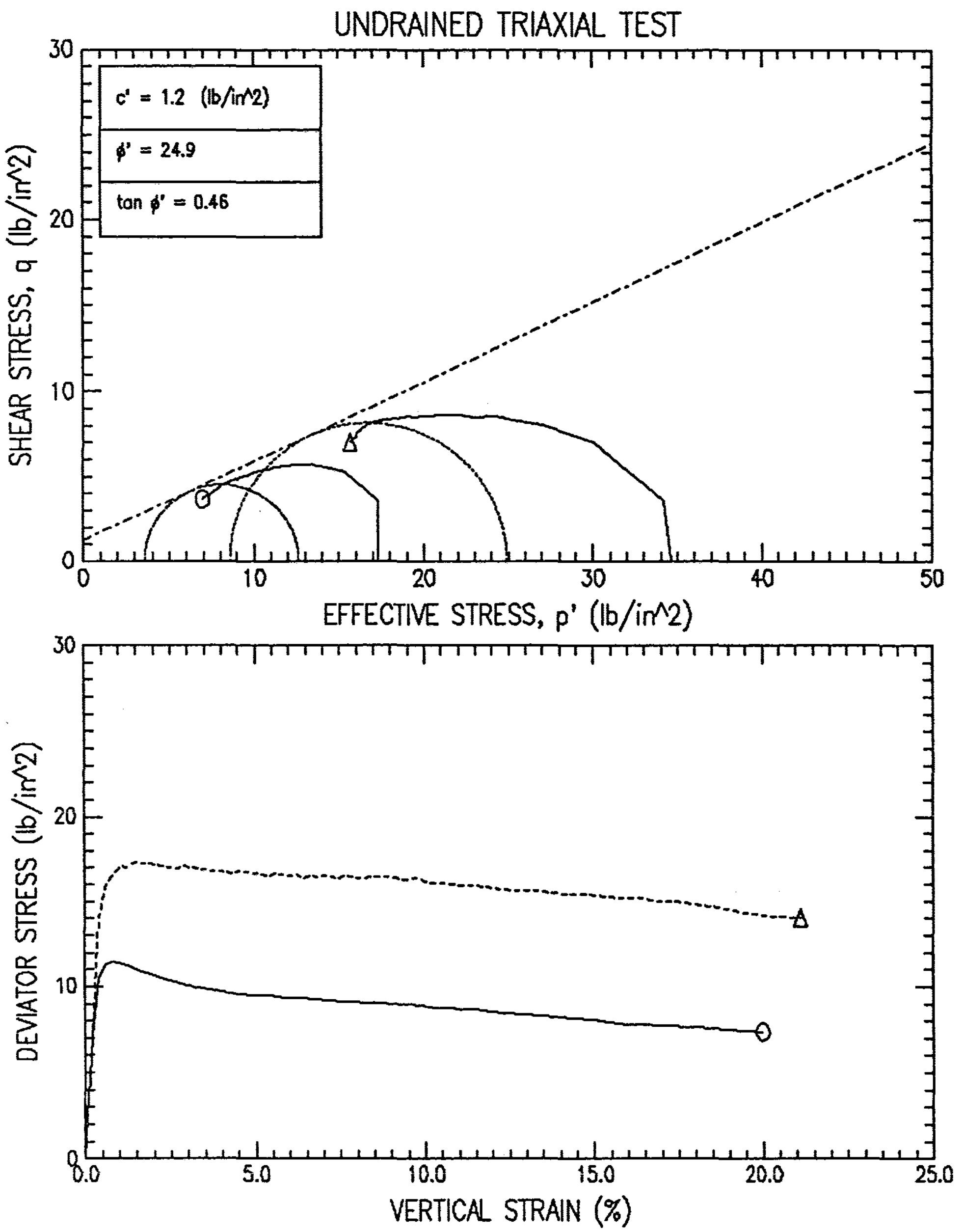
DESCRIPTION OF SPECIMENS:

1) DARK GRAY CLAYEY SILTY SAND/SANDY CLAY 2) DARK GRAY CLAYEY SILTY SAND/SANDY CLAY

LL 33.81	PL 16.01	PI 17.80	GS 2.75	TYPE OF SPECIMEN SHELBY	TYPE OF TEST CU (R)

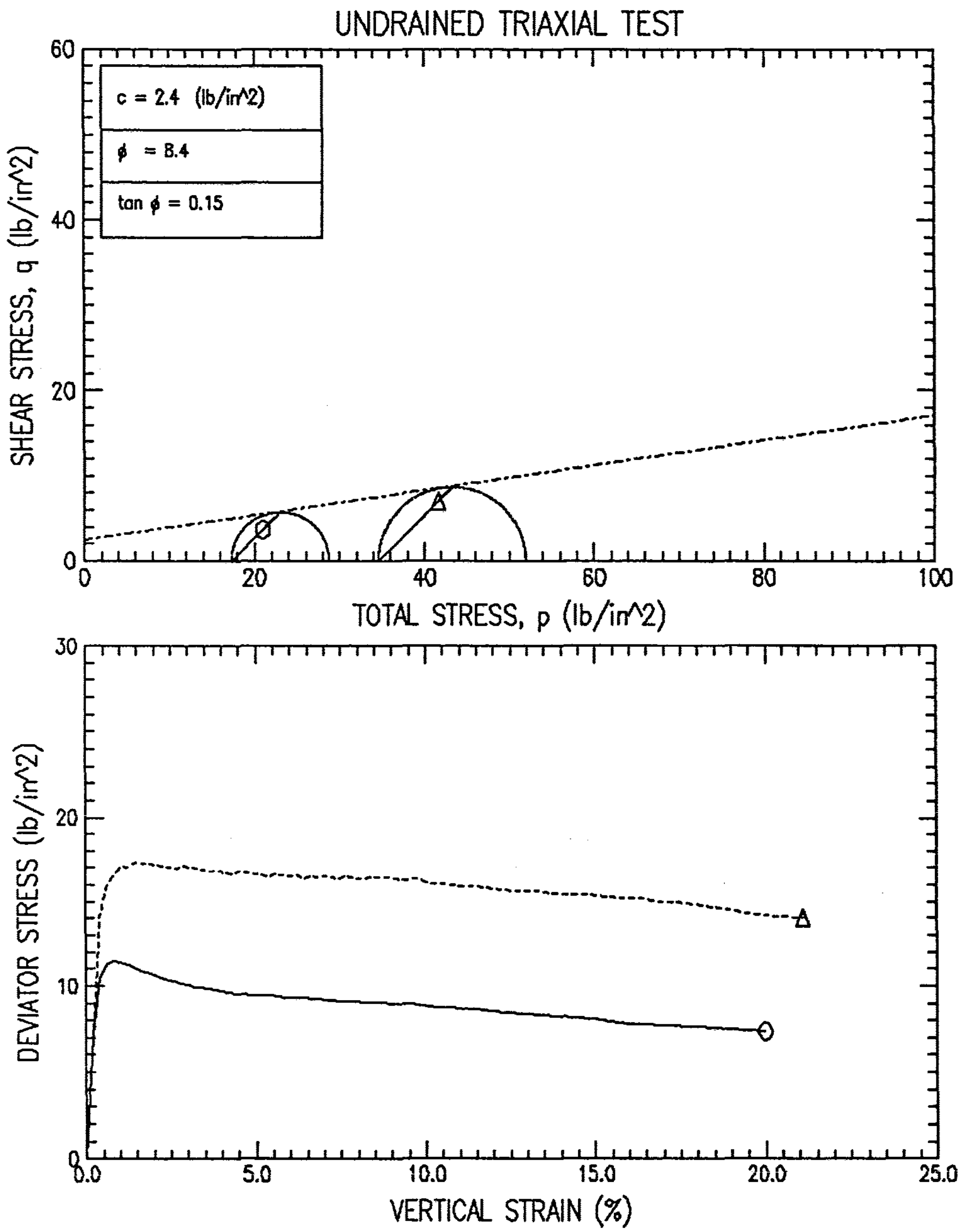
REMARKS:	PROJECT LOWER GUADALUPE RIVER					
1) TXCIU TEST WITH EFFECTIVE PRESSURE OF 17.3 PSI	PROJECT NO.973017NB					
2) TXCIU TEST WITH EFFECTIVE PRESSURE OF 34.6 PSI	BORING NO. WB-8	SAMPLE NO.	12B	12C		
	TECH. C. CAPPS	DEPTH/ELEV	22.5-25 FT	22.5-25 FT		
	LABORATORY	DATE	07/27/98	07/27/98		
	TRIAXIAL COMPRESSION TEST REPORT					

Thu 07-30-98, 10:58:42



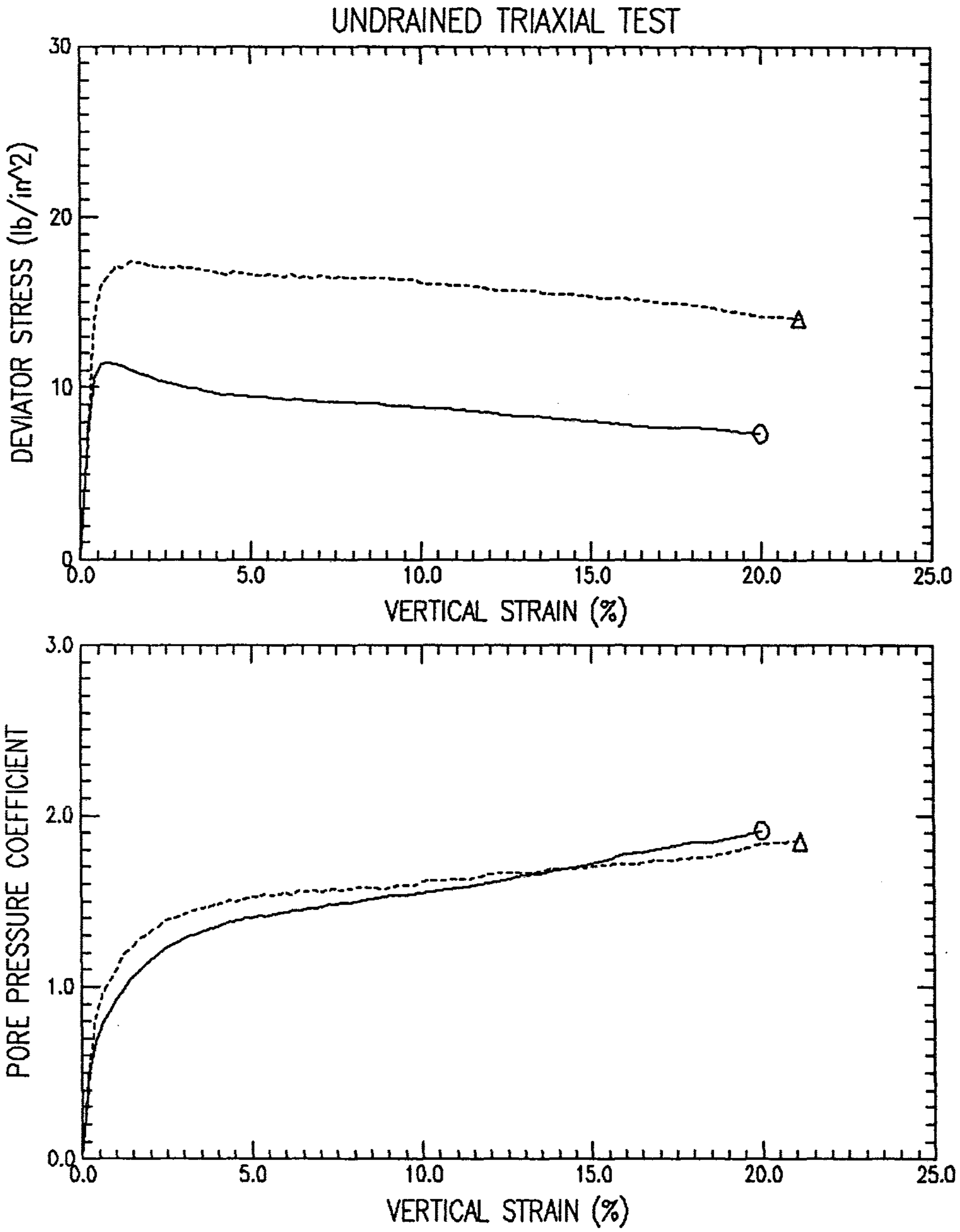
Project Name : LOWER GUADALUPE RIVER

Boring No:	Sample No	Depth	Test No	Filename	Symbol
WB-8	12B	22.5-25 FT	WB8-12B	WB8-12B.CIU	○
WB-8	12C	22.5-25 FT	WB8-12C	WB8-12C.CIU	△



Project Name : LOWER GUADALUPE RIVER

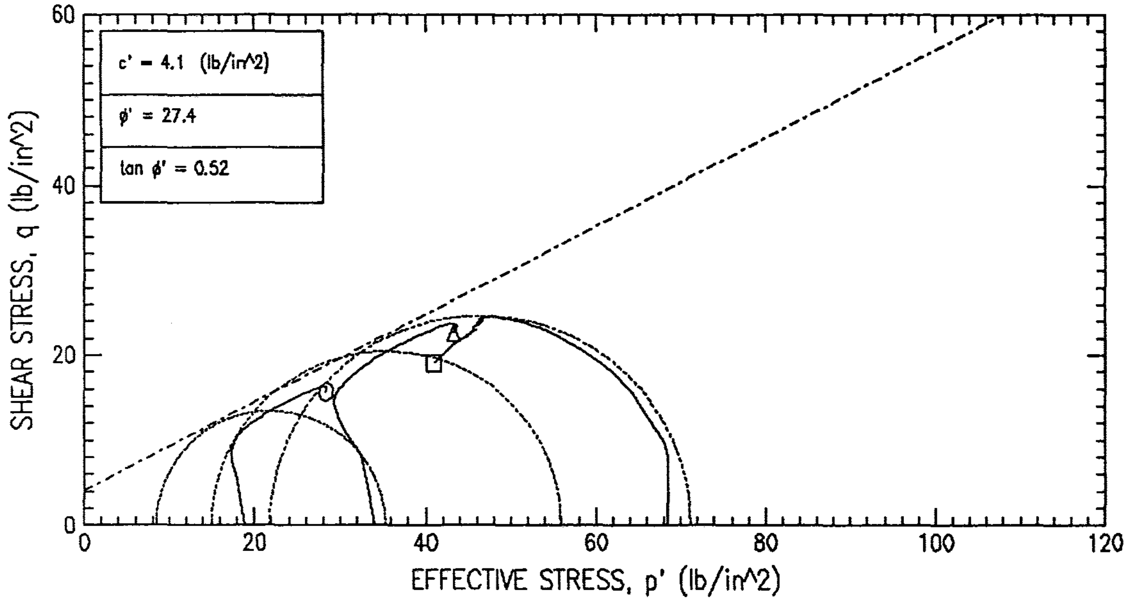
Boring No:	Sample No	Depth	Test No	Filename	Symbol
WB-8	12B	22.5-25 FT	WB8-12B	WB8-12B.CIU	O
WB-8	12C	22.5-25 FT	WB8-12C	WB8-12C.CIU	Δ



Project Name : LOWER GUADALUPE RIVER

Boring No:	Sample No	Depth	Test No	Filename	Symbol
WB-8	12B	22.5-25 FT	WB8-12B	WB8-12B.CIU	○
WB-8	12C	22.5-25 FT	WB8-12C	WB8-12C.CIU	△

UNDRAINED TRIAXIAL TEST

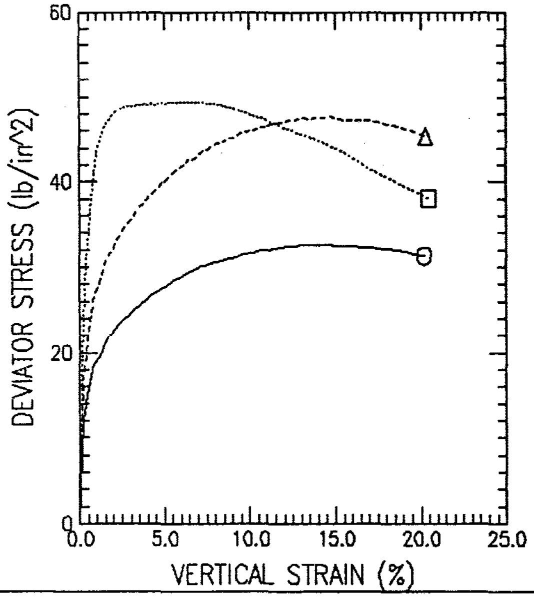


FAILURE SKETCHES

WB15-11A

WB15-11B

WB15-11C



	SYMBOL	○	△	□	
	TEST NO.	WB15-11A	WB15-11B	WB15-11C	
INITIAL	WATER CONTENT (%)	19.94	21.86	25.90	
	DRY DENSITY (lb/ft^3)	108.29	105.33	99.66	
	SATURATION (%)	93.80	95.57	98.69	
	VOID RATIO	0.585	0.629	0.722	
BEFORE SHEAR	WATER CONTENT (%)	19.73	20.82	22.86	
	DRY DENSITY (lb/ft^3)	111.29	109.17	105.41	
	SATURATION (%)	100.12	100.11	100.11	
	VOID RATIO	0.542	0.572	0.628	
	BACK PRESS. (lb/in^2)	60.00	60.00	60.00	
	MINOR PRIN. STRESS (lb/in^2)	18.80	34.20	68.40	
	MAX. DEV. STRESS (lb/in^2)	33.43	49.37	52.25	
	TIME TO FAILURE (min)	1028.65	1028.57	511.48	
	RATE OF STRAIN INCR (%/min)	0.00	0.00	0.00	
	INITIAL DIAMETER (in)	2.86	2.86	2.86	
	INITIAL HEIGHT (in)	5.98	5.98	5.98	
	B-VALUE	0.99	0.98	0.98	

STRAIN CONTROLLED

DESCRIPTION OF SPECIMENS:

1) GRAYISH BROWN FINE SANDY SILTY CLAY 2) OLIVE GRAY BROWN SANDY SI-CLAY TO CLAYEY SAND 3) OLIVE GRAY BROWN SA-SI CLAY TO CLAYEY SAND

LL 27.99	PL 16.68	PI 11.31	GS 2.75	TYPE OF SPECIMEN SHELBY	TYPE OF TEST CU (R)

REMARKS:

1) TXCIU TEST WITH EFFECTIVE PRESSURE OF 18.8 PSI

2) TXCIU TEST WITH EFFECTIVE PRESSURE OF 34.2 PSI

3) TXCIU TEST WITH EFFECTIVE PRESSURE OF 68.4 PSI

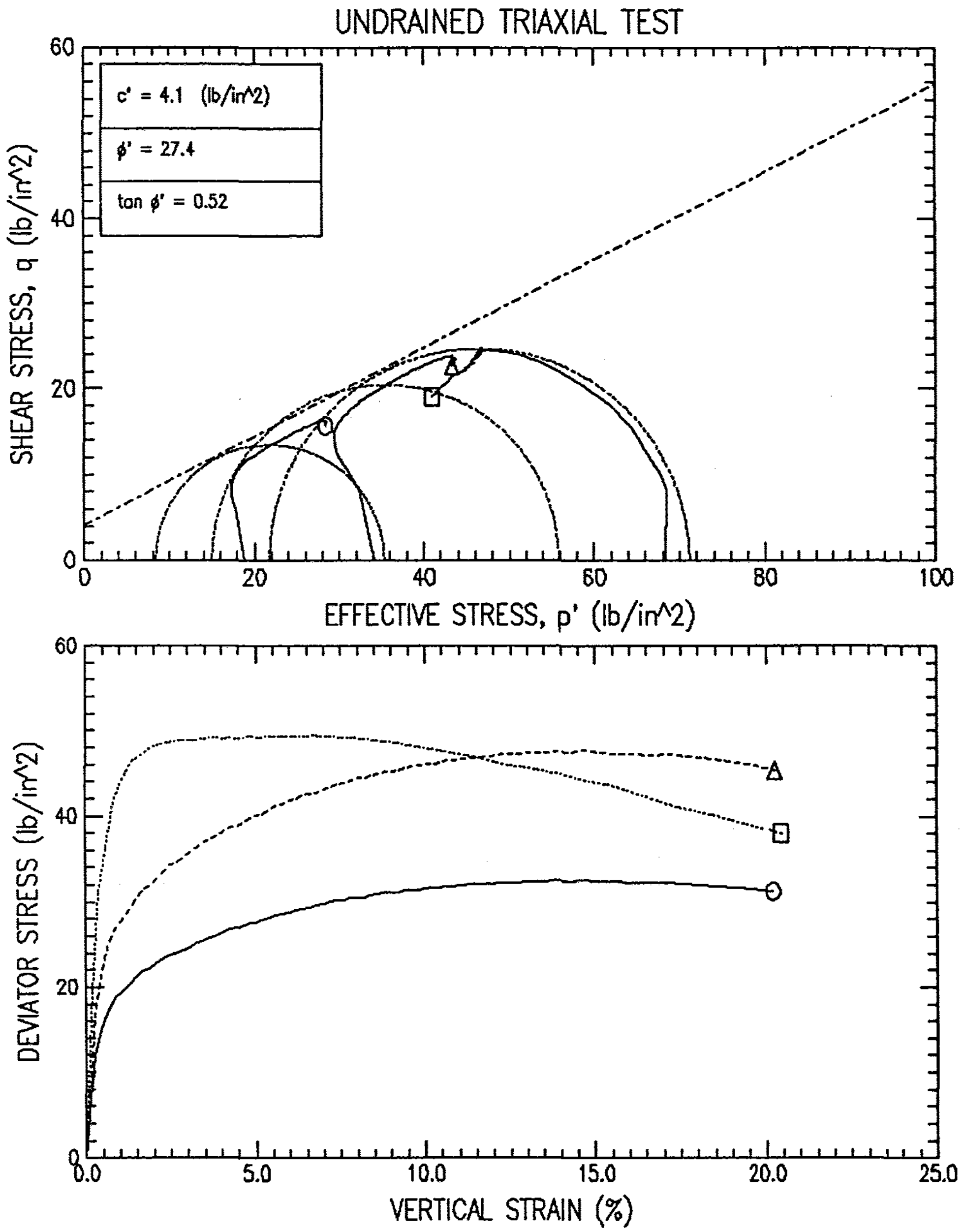
PROJECT LOWER GUADALUPE RIVER

PROJECT NO.973017NB

BORING NO. WB-15	SAMPLE NO.	11A	11B	11C
TECH. C. CAPPS	DEPTH/ELEV	20-22.5 FT	20-22.5 FT	20-22.5 FT
LABORATORY	DATE	07/22/98	07/22/98	07/22/98

TRIAXIAL COMPRESSION TEST REPORT

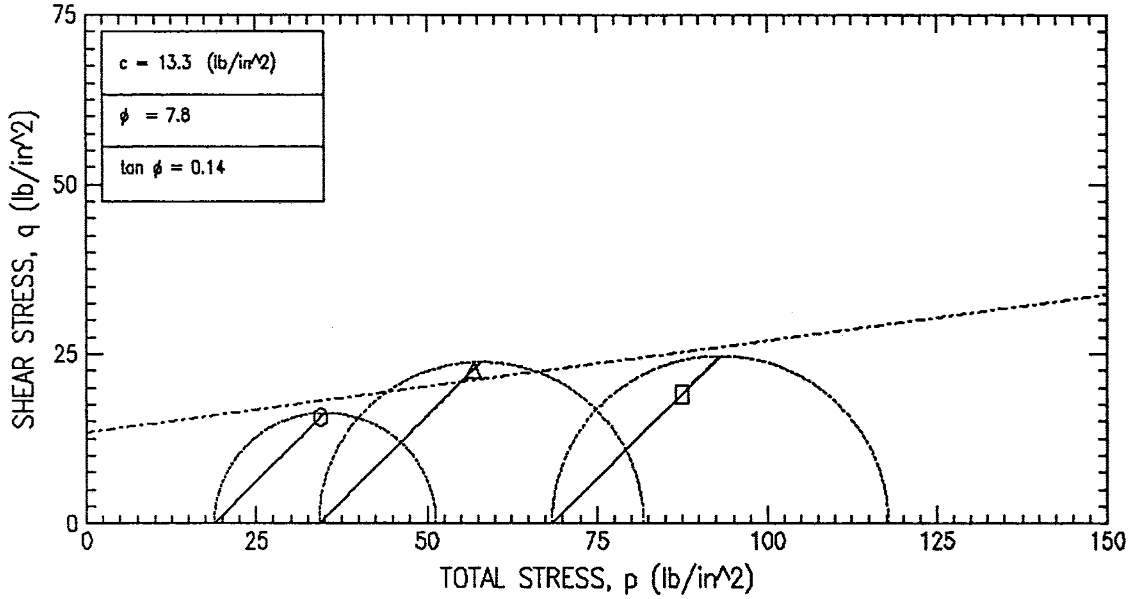
Fri 07-24-98, 12:12:55



Project Name : LOWER GUADALUPE RIVER

Boring No:	Sample No	Depth	Test No	Filename	Symbol
WB-15	11A	20-22.5 FT	WB15-11A	WB15-11A.CIU	○
WB-15	11B	20-22.5 FT	WB15-11B	WB15-11B.CIU	△
WB-15	11C	20-22.5 FT	WB15-11C	WB15-11C.CIU	□

UNDRAINED TRIAXIAL TEST

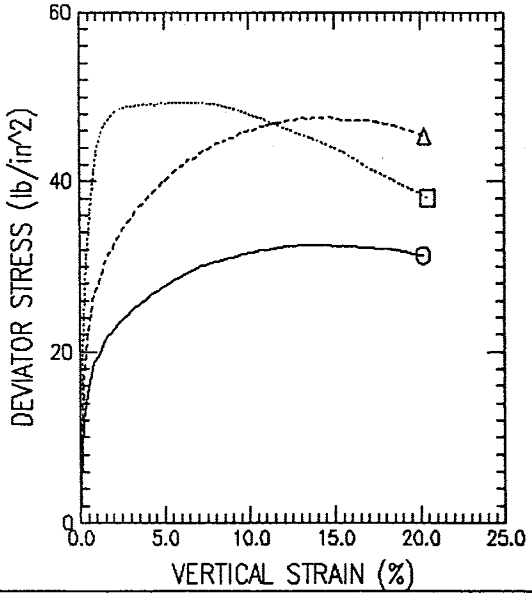


FAILURE SKETCHES

WB15-11A

WB15-11B

WB15-11C



	SYMBOL	○	△	□	
	TEST NO.	WB15-11A	WB15-11B	WB15-11C	
INITIAL	WATER CONTENT (%)	19.94	21.86	25.90	
	DRY DENSITY (lb/ft^3)	108.29	105.33	99.66	
	SATURATION (%)	93.80	95.57	98.69	
	VOID RATIO	0.585	0.629	0.722	
BEFORE SHEAR	WATER CONTENT (%)	19.73	20.82	22.86	
	DRY DENSITY (lb/ft^3)	111.29	109.17	105.41	
	SATURATION (%)	100.12	100.11	100.11	
	VOID RATIO	0.542	0.572	0.628	
	BACK PRESS. (lb/in^2)	60.00	60.00	60.00	
	MINOR PRIN. STRESS (lb/in^2)	18.80	34.20	68.40	
	MAX. DEV. STRESS (lb/in^2)	33.43	49.37	52.25	
	TIME TO FAILURE (min)	1028.85	1028.57	511.48	
	RATE OF STRAIN INCR (%/min)	0.00	0.00	0.00	
	INITIAL DIAMETER (in)	2.86	2.86	2.86	
	INITIAL HEIGHT (in)	5.98	5.98	5.98	
	B-VALUE	0.99	0.98	0.98	

STRAIN CONTROLLED

DESCRIPTION OF SPECIMENS:

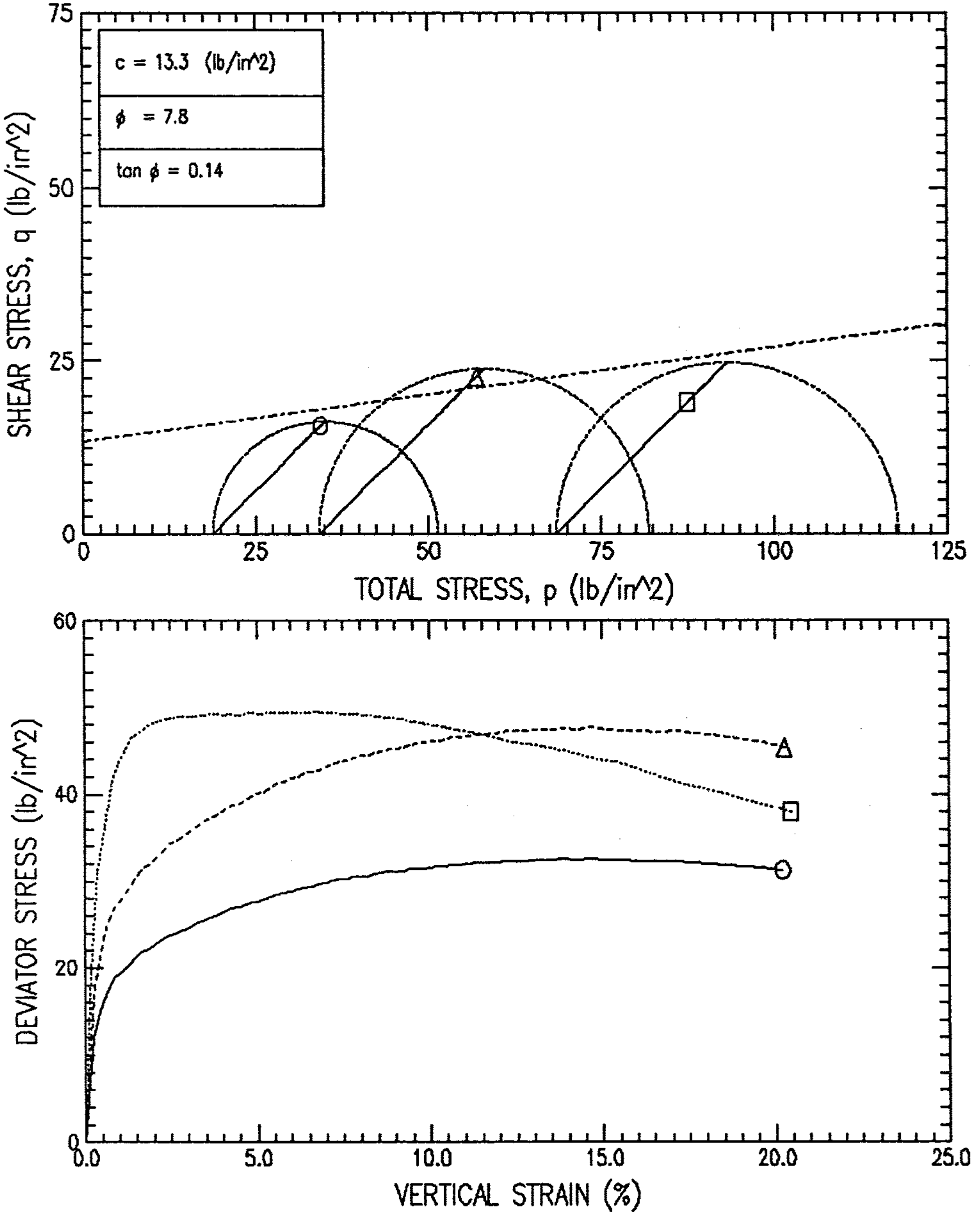
1) GRAYISH BROWN FINE SANDY SILTY CLAY 2) OLIVE GRAY BROWN SANDY SI-CLAY TO CLAYEY SAND 3) OLIVE GRAY BROWN SA-SI CLAY TO CLAYEY SAND

LL 27.99	PL 16.68	PI 11.31	GS 2.75	TYPE OF SPECIMEN SHELBY	TYPE OF TEST CU (R)

REMARKS:	PROJECT LOWER GUADALUPE RIVER				
1) TXCIU TEST WITH EFFECTIVE PRESSURE OF 18.8 PSI	PROJECT NO.973017NB				
2) TXCIU TEST WITH EFFECTIVE PRESSURE OF 34.2 PSI	BORING NO. WB-15	SAMPLE NO.	11A	11B	11C
3) TXCIU TEST WITH EFFECTIVE PRESSURE OF 68.4 PSI	TECH. C. CAPPS	DEPTH/ELEV	20-22.5 FT	20-22.5 FT	20-22.5 FT
	LABORATORY	DATE	07/22/98	07/22/98	07/22/98
	TRIAXIAL COMPRESSION TEST REPORT				

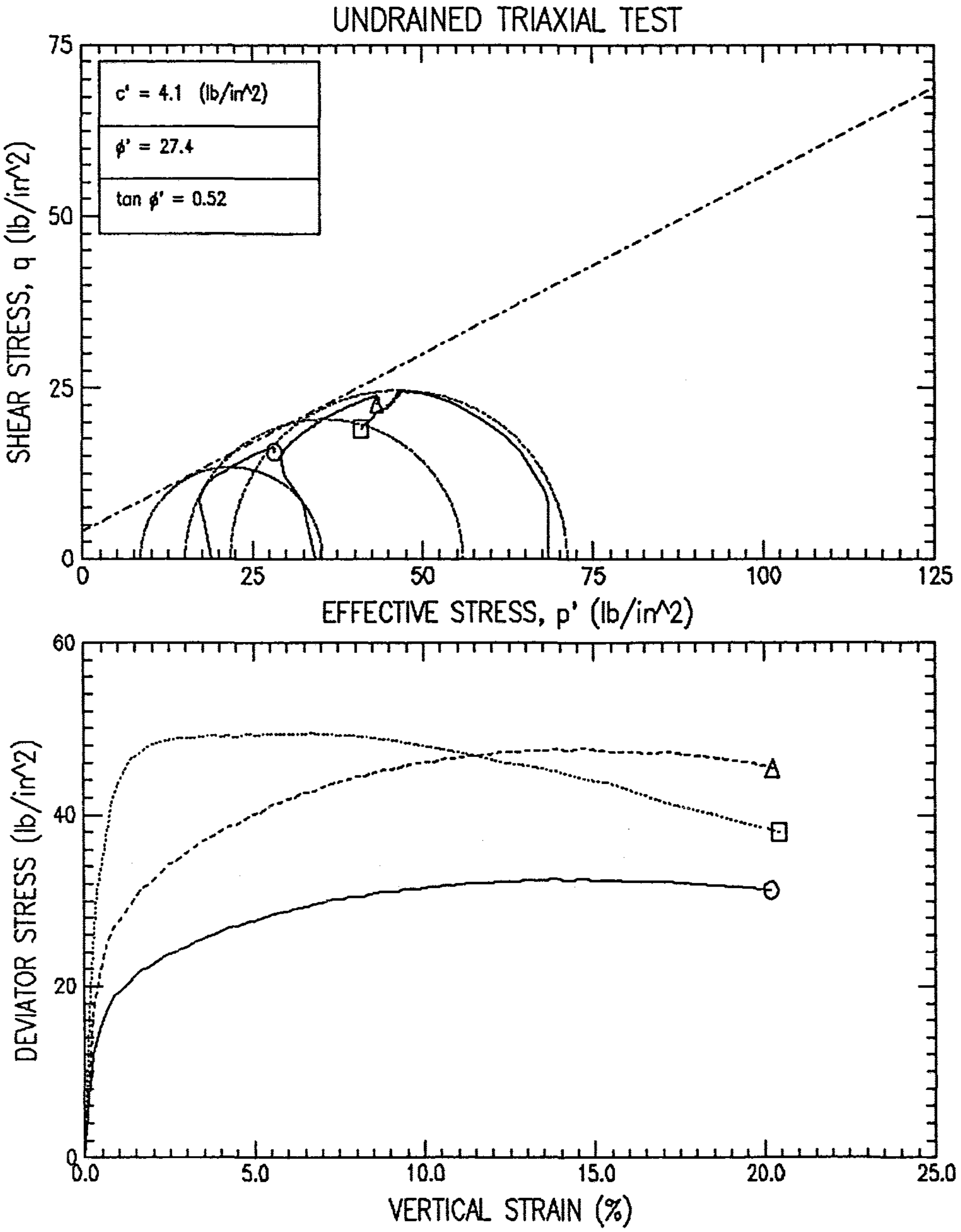
Fri 07-24-98, 12:31:41

UNDRAINED TRIAXIAL TEST



Project Name : LOWER GUADALUPE RIVER

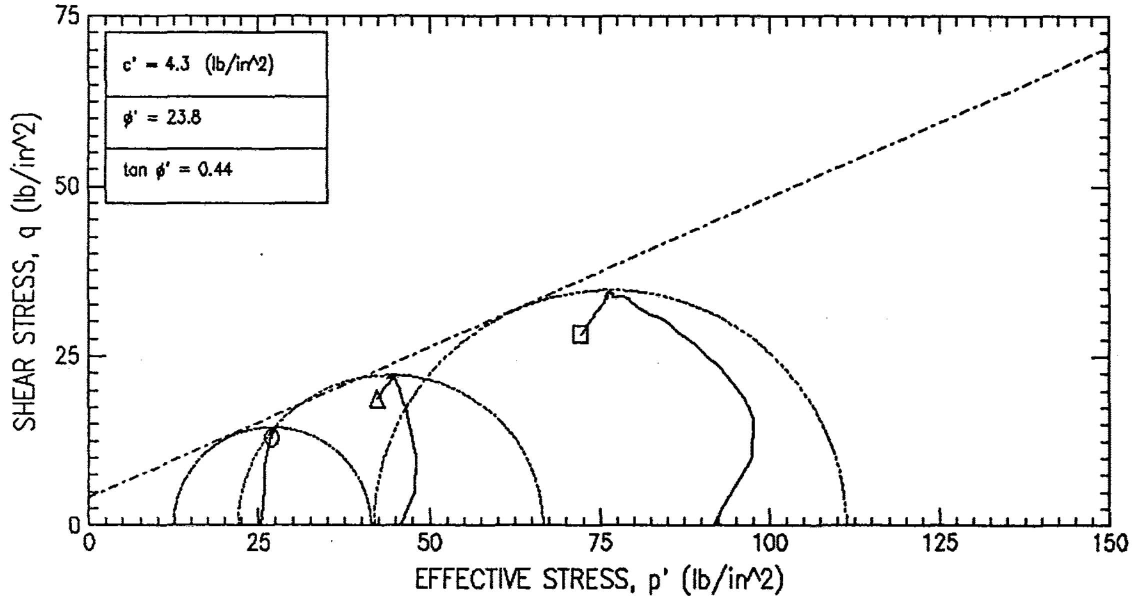
Boring No:	Sample No	Depth	Test No	Filename	Symbol
WB-15	11A	20-22.5 FT	WB15-11A	WB15-11A.CIU	○
WB-15	11B	20-22.5 FT	WB15-11B	WB15-11B.CIU	△
WB-15	11C	20-22.5 FT	WB15-11C	WB15-11C.CIU	□



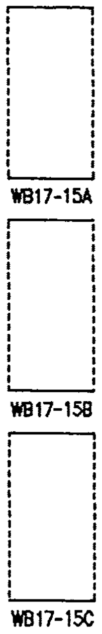
Project Name : LOWER GUADALUPE RIVER

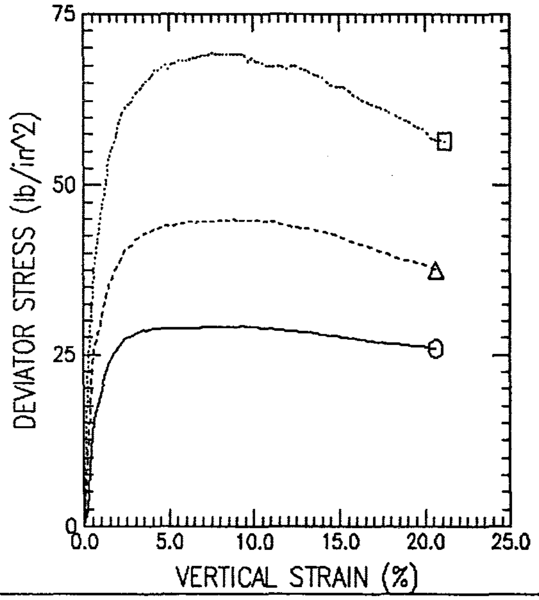
Boring No:	Sample No	Depth	Test No	Filename	Symbol
WB-15	11A	20-22.5 FT	WB15-11A	WB15-11A.CIU	O
WB-15	11B	20-22.5 FT	WB15-11B	WB15-11B.CIU	Δ
WB-15	11C	20-22.5 FT	WB15-11C	WB15-11C.CIU	☐

UNDRAINED TRIAXIAL TEST



FAILURE SKETCHES





SYMBOL		○	△	□	
TEST NO.		WB17-15A	WB17-15B	WB17-15C	
INITIAL	WATER CONTENT (%)	37.95	35.36	35.85	
	DRY DENSITY (lb/ft^3)	82.88	86.25	85.98	
	SATURATION (%)	97.49	98.24	98.99	
	VOID RATIO	1.071	0.990	0.996	
BEFORE SHEAR	WATER CONTENT (%)	35.78	32.80	29.81	
	DRY DENSITY (lb/ft^3)	86.51	90.25	94.37	
	SATURATION (%)	100.03	100.09	100.16	
	VOID RATIO	0.984	0.901	0.818	
	BACK PRESS. (lb/in^2)	80.00	80.00	80.00	
MINOR PRIN. STRESS (lb/in^2)		25.20	45.80	91.60	
MAX. DEV. STRESS (lb/in^2)		30.48	46.98	76.17	
TIME TO FAILURE (min)		698.22	659.80	593.60	
RATE OF STRAIN INCR (%/min)		0.00	0.00	0.00	
INITIAL DIAMETER (in)		2.86	2.86	2.86	
INITIAL HEIGHT (in)		5.98	5.98	5.98	
B-VALUE		0.98	0.98	0.99	

STRAIN CONTROLLED

DESCRIPTION OF SPECIMENS:

1) LT BROWN-GRAY TO BLUE GRAY SI-CLAY W/ ORG 2) LT BROWN GRAY TO BLUE GRAY SI-CLAY W/ ORG 3) LT BROWN GRAY TO BLUE GRAY SI-CLAY W/ ORG

LL 58.54	PL 27.76	PI 30.78	GS 2.75	TYPE OF SPECIMEN SHELBY	TYPE OF TEST CU (R)

REMARKS:

1) TXCIU TEST WITH EFFECTIVE PRESSURE OF 25.2 PSI

2) TXCIU TEST WITH EFFECTIVE PRESSURE OF 45.8 PSI

3) TXCIU TEST WITH EFFECTIVE PRESSURE OF 91.6 PSI

PROJECT LOWER GUADALUPE RIVER

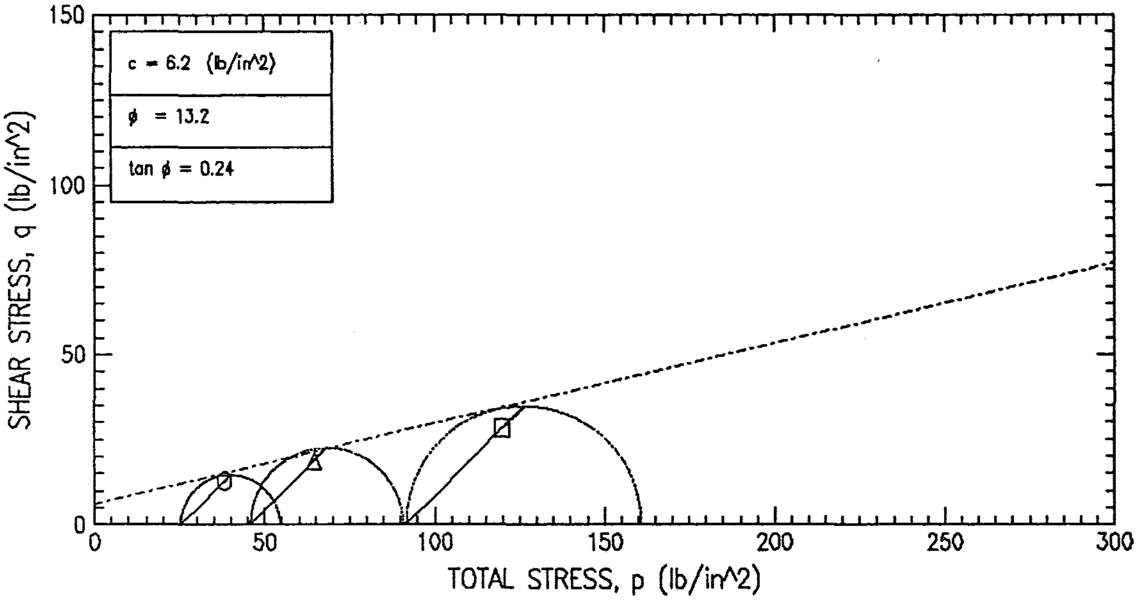
PROJECT NO.973017NB

BORING NO. WB-17	SAMPLE NO.	15A	15B	15C	
TECH. C. WASON	DEPTH/ELEV	25-27.5 FT	25-27.5 FT	25-27.5 FT	
LABORATORY	DATE	08/04/98	08/04/98	08/04/98	

TRIAXIAL COMPRESSION TEST REPORT

Thu 08-06-98, 10:02:38

UNDRAINED TRIAXIAL TEST

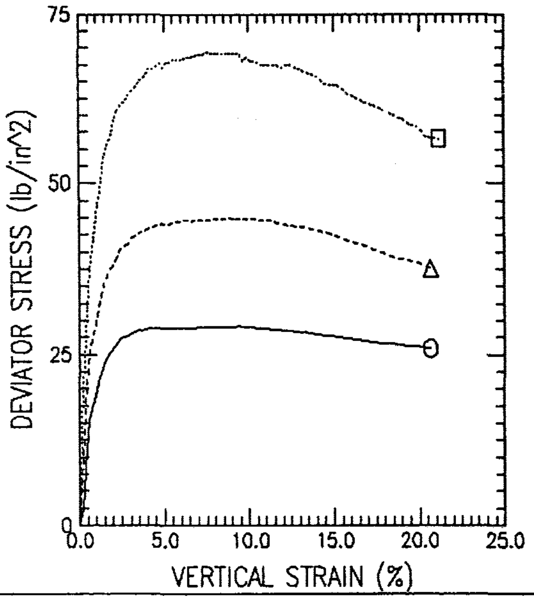


FAILURE SKETCHES

WB17-15A

WB17-15B

WB17-15C



SYMBOL		○	△	□	
TEST NO.		WB17-15A	WB17-15B	WB17-15C	
INITIAL	WATER CONTENT (%)	37.95	35.36	35.85	
	DRY DENSITY (lb/ft^3)	82.88	86.25	85.98	
	SATURATION (%)	97.49	98.24	98.99	
	VOID RATIO	1.071	0.990	0.996	
BEFORE SHEAR	WATER CONTENT (%)	35.78	32.80	29.81	
	DRY DENSITY (lb/ft^3)	86.51	90.25	94.37	
	SATURATION (%)	100.03	100.09	100.16	
	VOID RATIO	0.984	0.901	0.818	
	BACK PRESS. (lb/in^2)	80.00	80.00	80.00	
MINOR PRIN. STRESS (lb/in^2)		25.20	45.80	91.60	
MAX. DEV. STRESS (lb/in^2)		30.48	46.98	76.17	
TIME TO FAILURE (min)		698.22	659.80	593.60	
RATE OF STRAIN INCR (%/min)		0.00	0.00	0.00	
INITIAL DIAMETER (in)		2.86	2.86	2.86	
INITIAL HEIGHT (in)		5.98	5.98	5.98	
B-VALUE		0.98	0.98	0.99	

STRAIN CONTROLLED

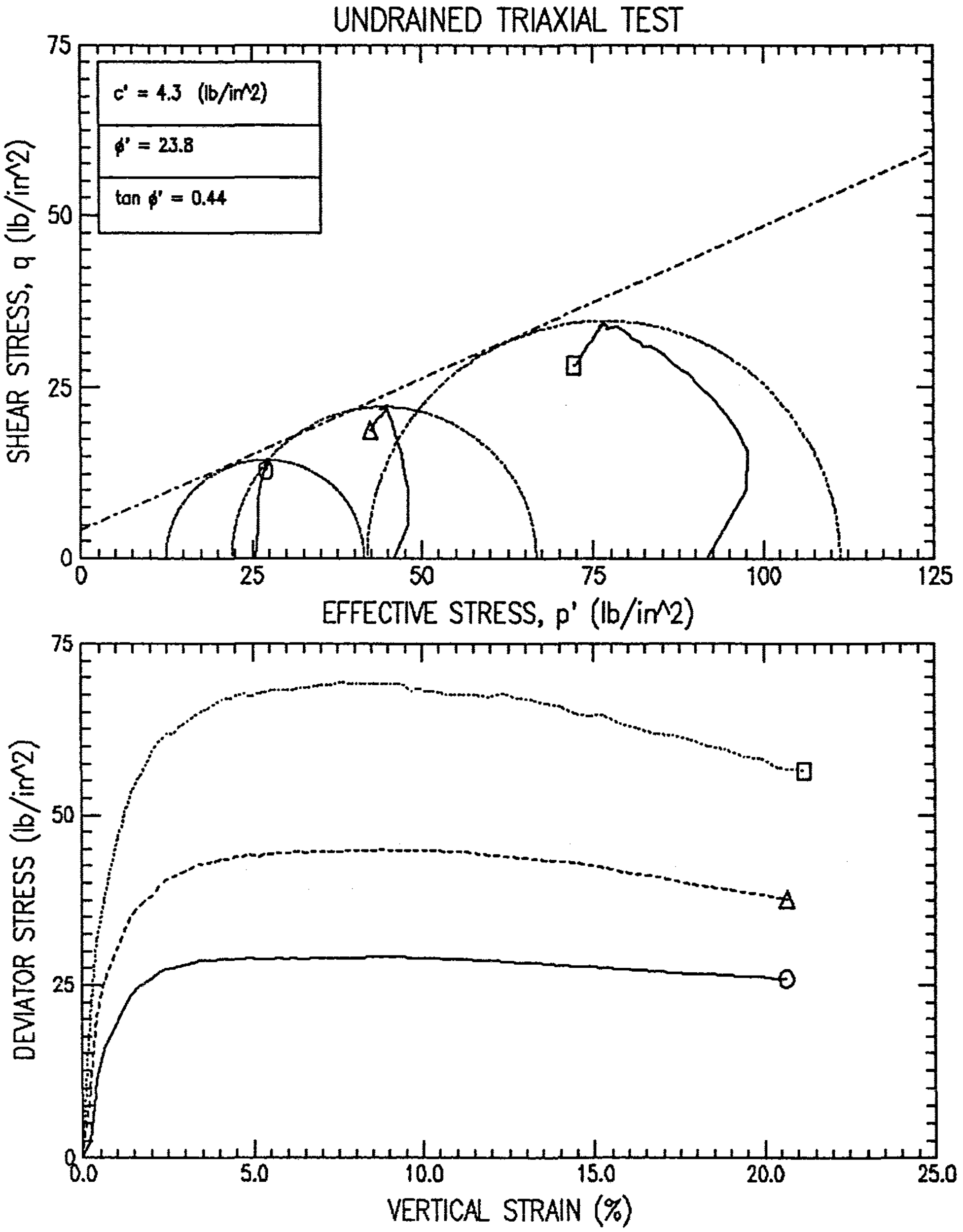
DESCRIPTION OF SPECIMENS:

1) LT BROWN-GRAY TO BLUE GRAY SI-CLAY W/ ORG 2) LT BROWN GRAY TO BLUE GRAY SI-CLAY W/ ORG 3) LT BROWN GRAY TO BLUE GRAY SI-CLAY W/ ORG

LL 58.54	PL 27.76	PI 30.78	GS 2.75	TYPE OF SPECIMEN SHELBY	TYPE OF TEST CU (R)

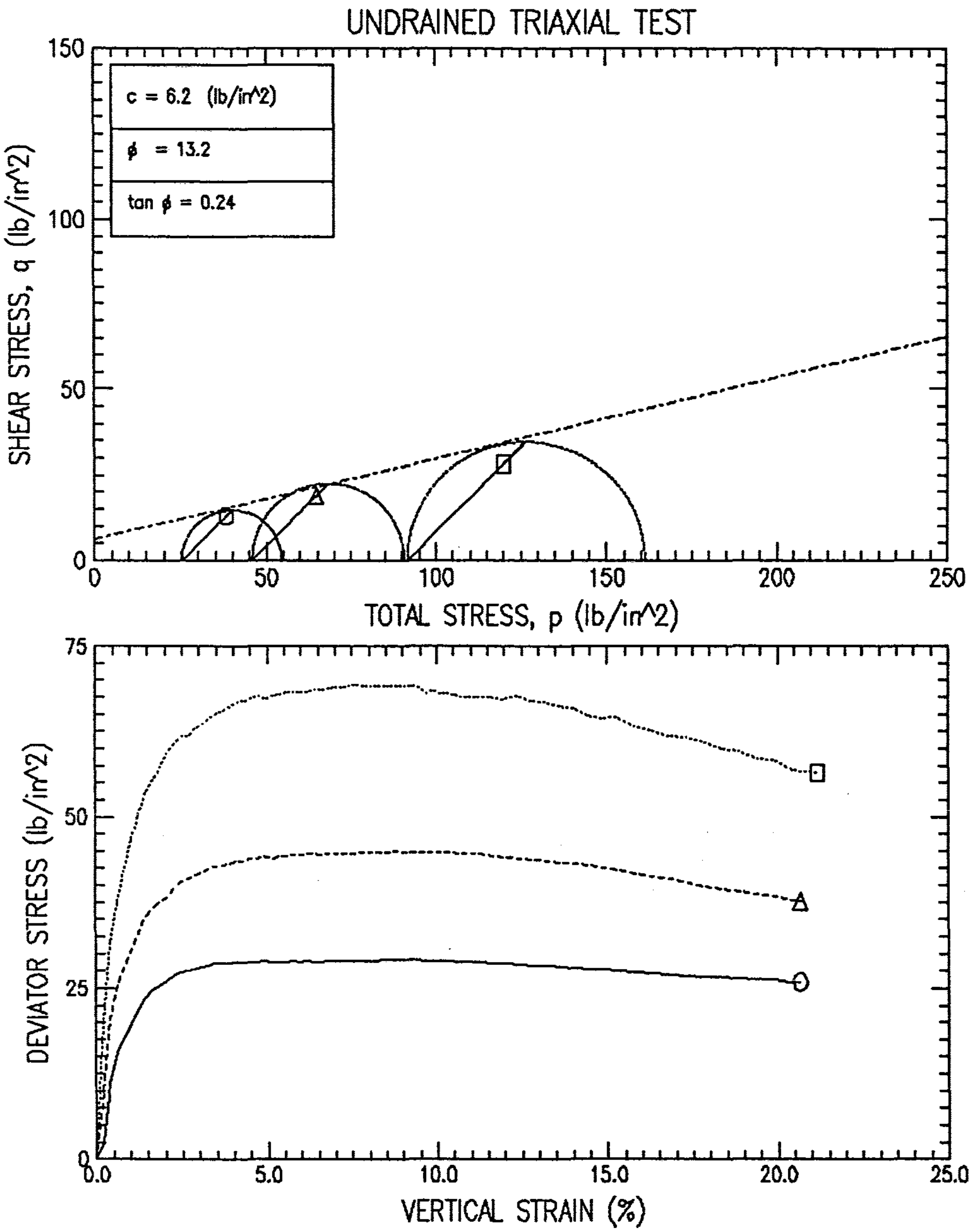
REMARKS:	PROJECT LOWER GUADALUPE RIVER					
1) TXCIU TEST WITH EFFECTIVE PRESSURE OF 25.2 PSI	PROJECT NO.973017NB					
2) TXCIU TEST WITH EFFECTIVE PRESSURE OF 45.8 PSI	BORING NO. WB-17	SAMPLE NO.	15A	15B	15C	
3) TXCIU TEST WITH EFFECTIVE PRESSURE OF 91.6 PSI	TECH. C. WASON	DEPTH/ELEV	25-27.5 FT	25-27.5 FT	25-27.5 FT	
	LABORATORY	DATE	08/04/98	08/04/98	08/04/98	
	TRIAXIAL COMPRESSION TEST REPORT					

Thu 08-06-98, 10:04:34



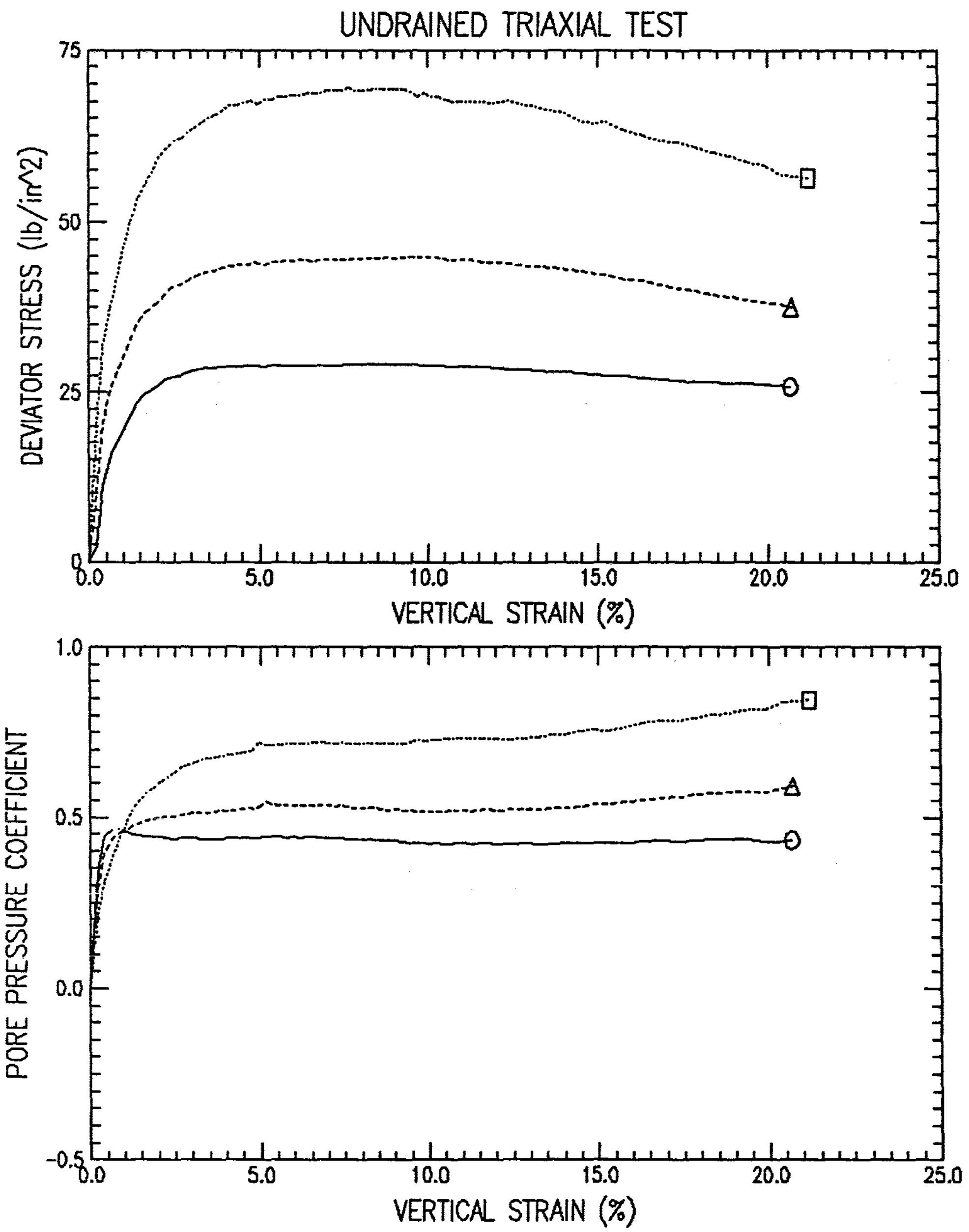
Project Name : LOWER GUADALUPE RIVER

Boring No:	Sample No	Depth	Test No	Filename	Symbol
WB-17	15A	25-27.5 FT	WB17-15A	WB17-15A.CIU	○
WB-17	15B	25-27.5 FT	WB17-15B	WB17-15B.CIU	△
WB-17	15C	25-27.5 FT	WB17-15C	WB17-15C.CIU	□



Project Name : LOWER GUADALUPE RIVER

Boring No:	Sample No	Depth	Test No	Filename	Symbol
WB-17	15A	25-27.5 FT	WB17-15A	WB17-15A.CIU	○
WB-17	15B	25-27.5 FT	WB17-15B	WB17-15B.CIU	△
WB-17	15C	25-27.5 FT	WB17-15C	WB17-15C.CIU	□

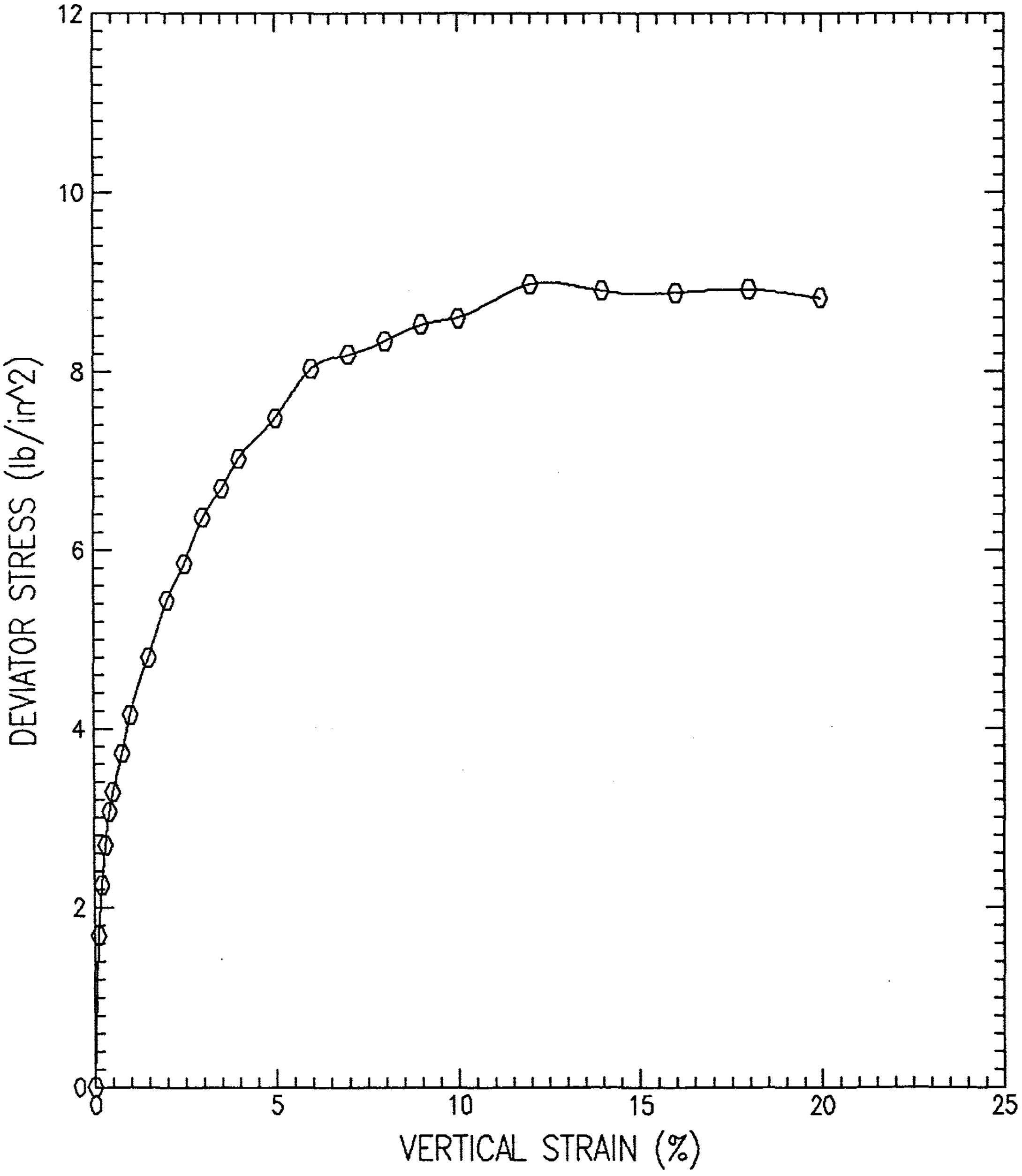


Project Name : LOWER GUADALUPE RIVER

Boring No:	Sample No	Depth	Test No	Filename	Symbol
WB-17	15A	25-27.5 FT	WB17-15A	WB17-15A.CIU	○
WB-17	15B	25-27.5 FT	WB17-15B	WB17-15B.CIU	△
WB-17	15C	25-27.5 FT	WB17-15C	WB17-15C.CIU	□

SECTION 2

UNCONSOLIDATED UNDRAINED TRIAXIAL TEST



Project Name : L. GUADALUPE RIVER F. C.
Project No : 973017NB   Boring No : EB-2   Sample No : 15-4
Test Date : 07/24/98   Test No : EB2-15-4   Depth : 30-31.5 ft
Description : DARK GRAYISH BVROWN SILTY CLAY W/TRACE FINE SAND

UNCONSOLIDATED UNDRAINED TRIAXIAL TEST

Project : L. GUADALUPE RIVER F. C.
Location : SAN JOSE, CA
Project No. : 973017NB
Test No. : EB2-15-4
Boring No. : EB-2
Test Date : 07/24/98
Tested by : C. WASON
Sample No. : 15-4
Depth : 30-31.5 ft
Checked by : S. CAPPS
Sample Type : MOD CAL
Elevation :
Soil Description : DARK GRAYISH BVROWN SILTY CLAY W/TRACE FINE SAND
Remarks : Dry Unit Weight = 57.26 pcf

Height : 3.937 (in)
Piston Diameter : 0.000 (in)
Quality of Sample : GOOD
Area : 2.96 (in^2)
Piston Friction : 0.00 (lb)
Unit Weight : 96.43 (lb/ft^3)
Volume : 11.64 (in^3)
Piston Weight : 0.00 (gm)
Cell Pressure : 17.60 (lb/in^2)

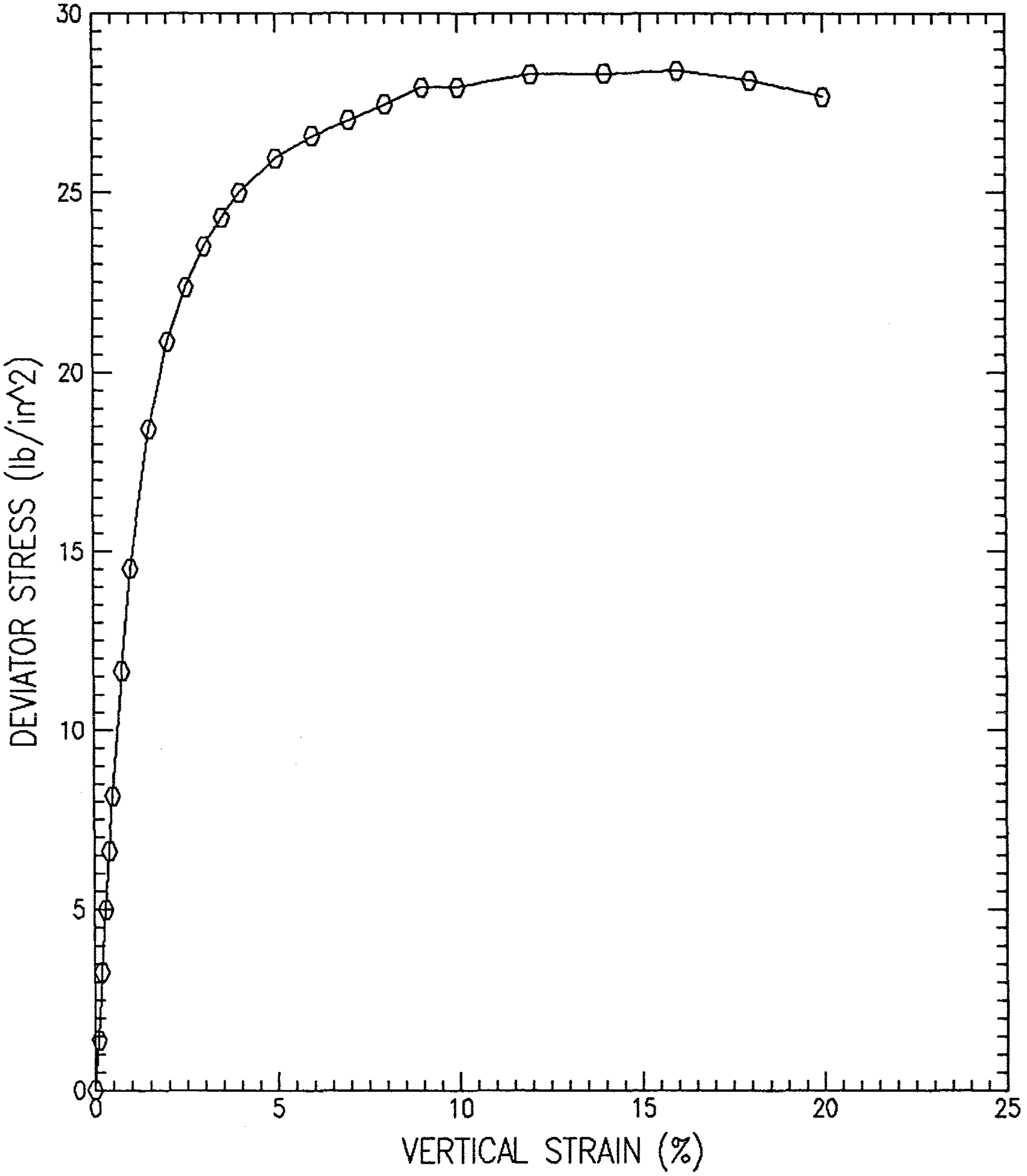
	WATER CONTENT BEFORE TEST	AFTER TEST	TRIMMINGS
CONTAINER NO.			
WT CONTAINER + WET SOIL (gm)	294.59	294.59	0.00
WT CONTAINER + DRY SOIL (gm)	175.00	175.00	0.00
WT WATER (gm)	119.59	119.59	0.00
WT CONTAINER (gm)	0.00	0.00	0.00
WT DRY SOIL (gm)	175.00	175.00	0.00
WATER CONTENT (%)	68.34	68.34	0.00

UNCONSOLIDATED UNDRAINED TRIAXIAL TEST

Project : L. GUADALUPE RIVER F. C. Location : SAN JOSE, CA
Project No. : 973017NB Test No. : EB2-15-4
Boring No. : EB-2 Test Date : 07/24/98 Tested by : C. WASON
Sample No. : 15-4 Depth : 30-31.5 ft Checked by : S. CAPPS
Sample Type : MOD CAL Elevation :
Soil Description : DARK GRAYISH BVROWN SILTY CLAY W/TRACE FINE SAND
Remarks : Dry Unit Weight = 57.26 pcf

	AXIAL COMPRESSION (in)	AXIAL STRAIN (%)	LOAD (lb)	CORR. LOAD ON SAMPLE (lb)	VERTICAL STRESS (lb/in^2)	SHEAR STRESS (lb/in^2)
1)	0.000	0.00	0.00	0.00	17.60	0.00
2)	0.004	0.10	4.99	4.99	19.29	0.84
3)	0.008	0.20	6.65	6.65	19.84	1.12
4)	0.012	0.30	7.98	7.98	20.29	1.35
5)	0.016	0.41	9.09	9.09	20.66	1.53
6)	0.020	0.51	9.75	9.75	20.88	1.64
7)	0.030	0.76	11.08	11.08	21.32	1.86
8)	0.039	0.99	12.41	12.41	21.76	2.08
9)	0.059	1.50	14.40	14.40	22.40	2.40
10)	0.079	2.01	16.40	16.40	23.04	2.72
11)	0.098	2.49	17.73	17.73	23.45	2.92
12)	0.118	3.00	19.39	19.39	23.96	3.18
13)	0.138	3.51	20.50	20.50	24.29	3.35
14)	0.157	3.99	21.61	21.61	24.62	3.51
15)	0.197	5.00	23.27	23.27	25.08	3.74
16)	0.236	5.99	25.26	25.26	25.63	4.02
17)	0.276	7.01	26.04	26.04	25.79	4.10
18)	0.315	8.00	26.81	26.81	25.95	4.17
19)	0.354	8.99	27.70	27.70	26.13	4.26
20)	0.394	10.01	28.25	28.25	26.20	4.30
21)	0.472	11.99	30.14	30.14	26.57	4.49
22)	0.551	14.00	30.58	30.58	26.50	4.45
23)	0.630	16.00	31.25	31.25	26.48	4.44
24)	0.709	18.01	32.13	32.13	26.51	4.46
25)	0.787	19.99	32.58	32.58	26.42	4.41

UNCONSOLIDATED UNDRAINED TRIAXIAL TEST



Project Name : L. GUADALUPE RIVER F. C.
Project No : 973017NB Boring No : WB-4 Sample No : 7
Test Date : 07/24/98 Test No : WB4-7 Depth : 21.5-24 ft
Description : lt. grayish brown clay

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                                          UNCONSOLIDATED UNDRAINED TRIAXIAL TEST

Project : L. GUADALUPE RIVER F. C.  Location : SAN JOSE, CA
Project No. : 973017NB              Test No. : WB4-7
Boring No. : WB-4                   Test Date : 07/24/98                Tested by : C. WASON
Sample No. : 7                      Depth : 21.5-24 ft                  Checked by : S. CAPPS
Sample Type : SHELBY                Elevation :
Soil Description : lt. grayish brown clay
Remarks : Dry Unit Weight = 102.56 pcf

Height : 5.984 (in)                 Piston Diameter : 0.000 (in)        Quality of Sample : GOOD
Area : 6.42 (in^2)                  Piston Friction : 0.00 (lb)         Unit Weight : 126.82 (lb/ft^3)
Volume : 38.44 (in^3)               Piston Weight : 0.00 (gm)           Cell Pressure : 22.00 (lb/in^2)

                                      WATER CONTENT
                                    BEFORE TEST         AFTER TEST          TRIMMINGS
CONTAINER NO.
WT CONTAINER + WET SOIL (gm)          1279.80             1279.80               0.00
WT CONTAINER + DRY SOIL (gm)          1035.50             1035.50               0.00
WT WATER (gm)                          244.30              244.30               0.00
WT CONTAINER (gm)                        0.00                0.00               0.00
WT DRY SOIL (gm)                      1035.50             1035.50               0.00
WATER CONTENT (%)                       23.59               23.59               0.00
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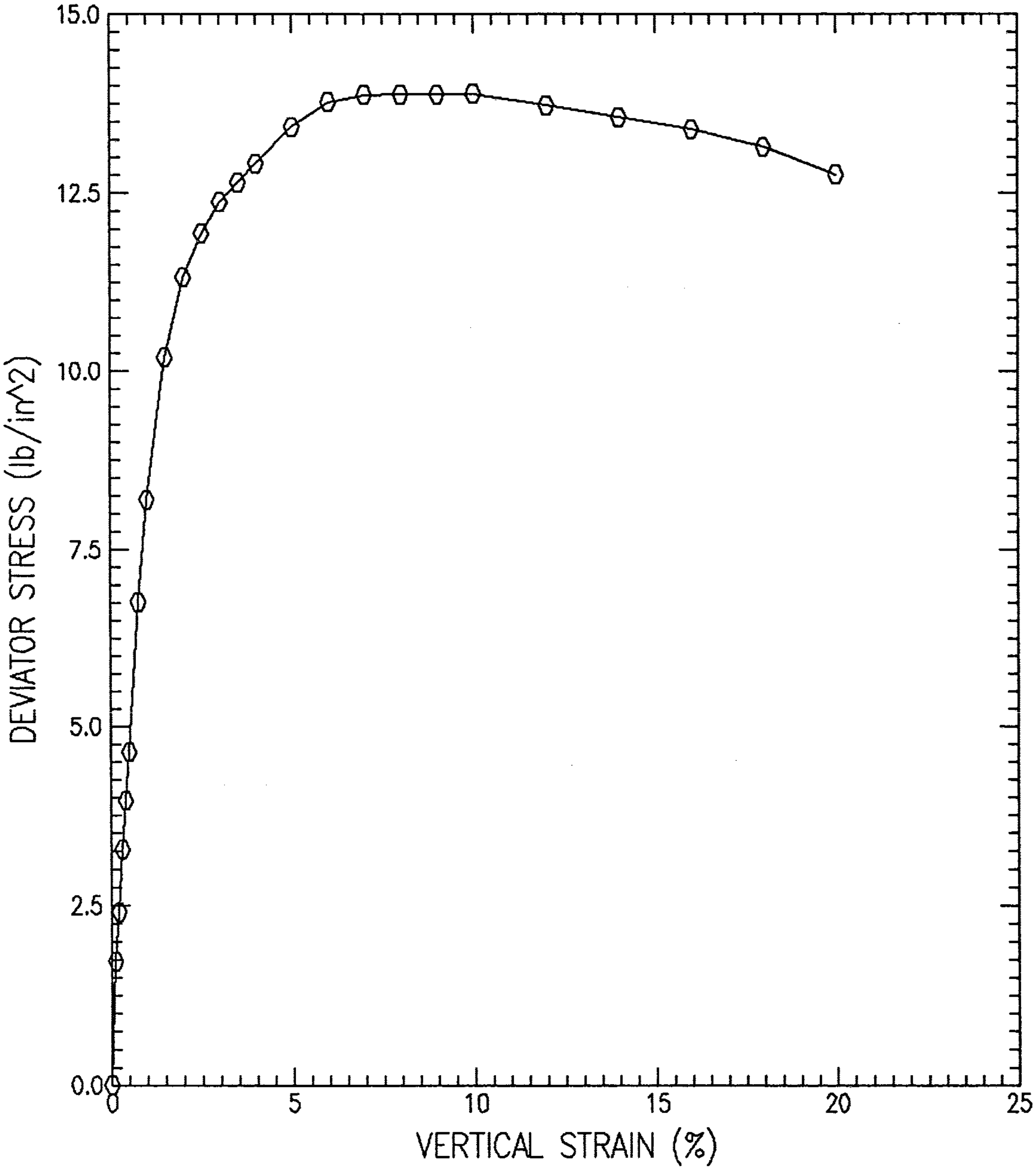
UNCONSOLIDATED UNDRAINED TRIAXIAL TEST

Project : L. GUADALUPE RIVER F. C. Location : SAN JOSE, CA
Project No. : 973017NB Test No. : WB4-7
Boring No. : WB-4 Test Date : 07/24/98 Tested by : C. WASON
Sample No. : 7 Depth : 21.5-24 ft Checked by : S. CAPPS
Sample Type : SHELBY Elevation :
Soil Description : lt. grayish brown clay
Remarks : Dry Unit Weight = 102.56 pcf

	AXIAL COMPRESSION (in)	AXIAL STRAIN (%)	LOAD (lb)	CORR. LOAD ON SAMPLE (lb)	VERTICAL STRESS (lb/in^2)	SHEAR STRESS (lb/in^2)
1)	0.000	0.00	0.00	0.00	22.00	0.00
2)	0.006	0.10	8.86	8.86	23.38	0.69
3)	0.012	0.20	21.05	21.05	25.27	1.64
4)	0.018	0.30	32.13	32.13	26.99	2.49
5)	0.024	0.40	42.66	42.66	28.61	3.31
6)	0.030	0.50	52.63	52.63	30.15	4.08
7)	0.045	0.75	75.34	75.34	33.64	5.82
8)	0.060	1.00	94.18	94.18	36.51	7.26
9)	0.090	1.50	120.22	120.22	40.43	9.22
10)	0.120	2.01	136.84	136.84	42.87	10.44
11)	0.150	2.51	147.36	147.36	44.36	11.18
12)	0.180	3.01	155.67	155.67	45.50	11.75
13)	0.209	3.49	161.77	161.77	46.30	12.15
14)	0.239	3.99	167.31	167.31	47.00	12.50
15)	0.299	5.00	175.62	175.62	47.97	12.99
16)	0.359	6.00	181.71	181.71	48.59	13.29
17)	0.419	7.00	186.70	186.70	49.03	13.51
18)	0.479	8.00	191.68	191.68	49.45	13.72
19)	0.539	9.01	197.22	197.22	49.93	13.97
20)	0.598	9.99	199.44	199.44	49.94	13.97
21)	0.718	12.00	206.64	206.64	50.31	14.15
22)	0.838	14.00	211.63	211.63	50.33	14.16
23)	0.957	15.99	217.17	217.17	50.40	14.20
24)	1.077	18.00	220.49	220.49	50.14	14.07
25)	1.197	20.00	222.15	222.15	49.66	13.83

UNCONSOLIDATED UNDRAINED TRIAXIAL TEST



Project Name : L. GUADALUPE RIVER F. C.
Project No : 973017NB Boring No : WB-5 Sample No : 14
Test Date : 07/24/98 Test No : WB5-14 Depth : 30-32.5 ft
Description : grayish dark brown silty clay

UNCONSOLIDATED UNDRAINED TRIAXIAL TEST

Project : L. GUADALUPE RIVER F. C.
Location : SAN JOSE, CA
Project No. : 973017NB
Test No. : WB5-14
Boring No. : WB-5
Test Date : 07/24/98
Tested by : C. WASON
Sample No. : 14
Depth : 30-32.5 ft
Checked by : S. CAPPS
Sample Type : SHELBY
Elevation :
Soil Description : grayish dark brown silty clay
Remarks : Dry Unit Weight = 91.17 pcf

Height : 5.984 (in)
Piston Diameter : 0.000 (in)
Quality of Sample : GOOD
Area : 6.42 (in^2)
Piston Friction : 0.00 (lb)
Unit Weight : 120.61 (lb/ft^3)
Volume : 38.44 (in^3)
Piston Weight : 0.00 (gm)
Cell Pressure : 26.00 (lb/in^2)

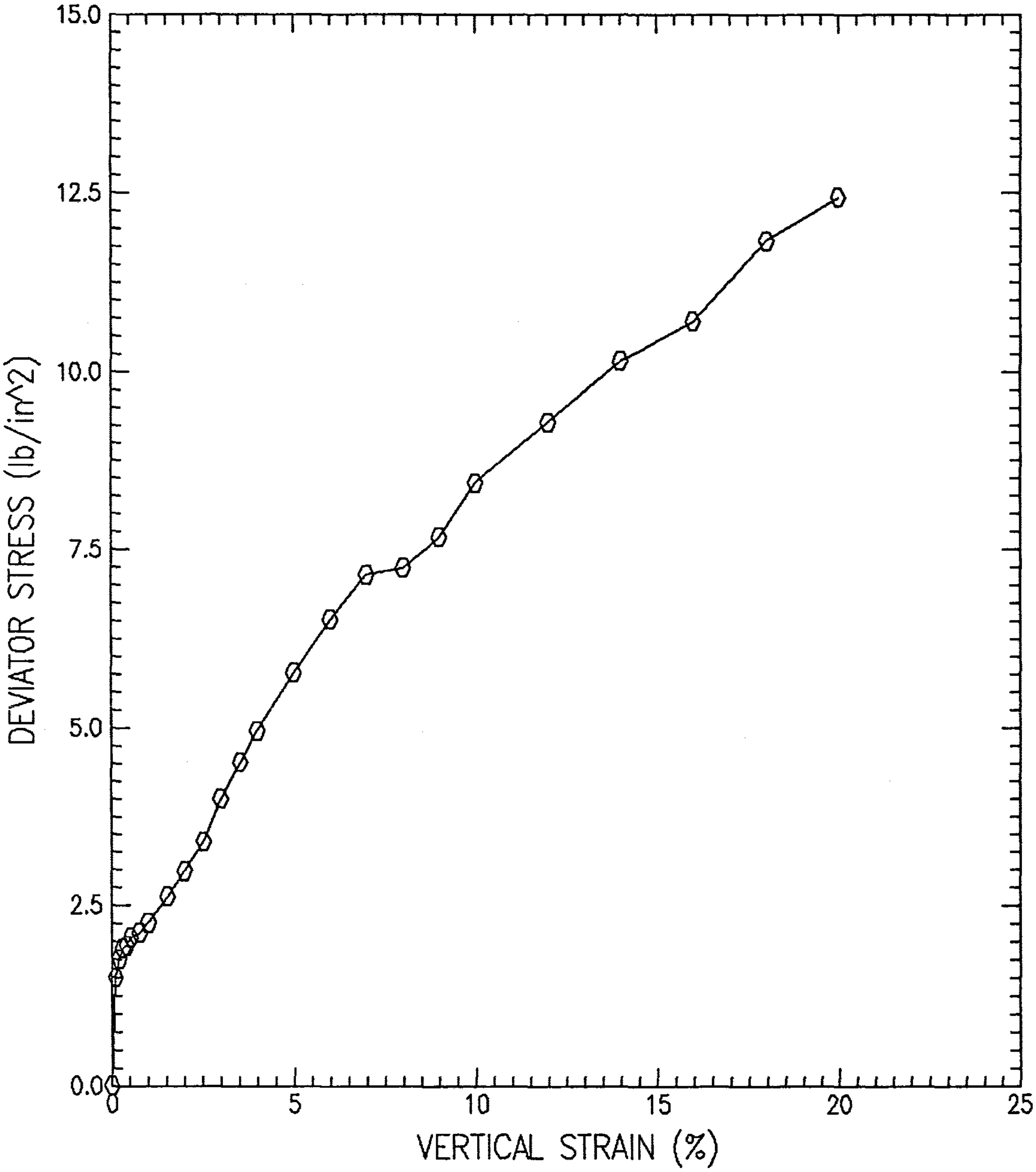
	WATER CONTENT BEFORE TEST	AFTER TEST	TRIMMINGS
CONTAINER NO.			
WT CONTAINER + WET SOIL (gm)	1317.10	1217.10	0.00
WT CONTAINER + DRY SOIL (gm)	920.50	920.50	0.00
WT WATER (gm)	396.60	296.60	0.00
WT CONTAINER (gm)	0.00	0.00	0.00
WT DRY SOIL (gm)	920.50	920.50	0.00
WATER CONTENT (%)	43.09	32.22	0.00

UNCONSOLIDATED UNDRAINED TRIAXIAL TEST

Project : L. GUADALUPE RIVER F. C.
Location : SAN JOSE, CA
Project No. : 973017NB
Test No. : WB5-14
Boring No. : WB-5
Test Date : 07/24/98
Tested by : C. WASON
Sample No. : 14
Depth : 30-32.5 ft
Checked by : S. CAPPS
Sample Type : SHELBY
Elevation :
Soil Description : grayish dark brown silty clay
Remarks : Dry Unit Weight = 91.17 pcf

	AXIAL COMPRESSION (in)	AXIAL STRAIN (%)	LOAD (lb)	CORR. LOAD ON SAMPLE (lb)	VERTICAL STRESS (lb/in^2)	SHEAR STRESS (lb/in^2)
1)	0.000	0.00	0.00	0.00	26.00	0.00
2)	0.006	0.10	11.08	11.08	27.72	0.86
3)	0.012	0.20	15.51	15.51	28.41	1.20
4)	0.018	0.30	21.05	21.05	29.27	1.63
5)	0.024	0.40	25.48	25.48	29.95	1.98
6)	0.030	0.50	29.92	29.92	30.63	2.32
7)	0.045	0.75	43.77	43.77	32.76	3.38
8)	0.060	1.00	53.18	53.18	34.20	4.10
9)	0.090	1.50	66.48	66.48	36.19	5.10
10)	0.120	2.01	74.24	74.24	37.32	5.66
11)	0.150	2.51	78.67	78.67	37.94	5.97
12)	0.180	3.01	81.99	81.99	38.38	6.19
13)	0.209	3.49	84.21	84.21	38.65	6.33
14)	0.239	3.99	86.42	86.42	38.92	6.46
15)	0.299	5.00	90.86	90.86	39.44	6.72
16)	0.359	6.00	94.18	94.18	39.78	6.89
17)	0.419	7.00	95.84	95.84	39.87	6.94
18)	0.479	8.00	96.95	96.95	39.88	6.94
19)	0.539	9.01	98.06	98.06	39.89	6.94
20)	0.598	9.99	99.17	99.17	39.89	6.95
21)	0.718	12.00	100.27	100.27	39.74	6.87
22)	0.838	14.00	101.38	101.38	39.57	6.79
23)	0.957	15.99	102.49	102.49	39.40	6.70
24)	1.077	18.00	103.04	103.04	39.15	6.58
25)	1.197	20.00	102.49	102.49	38.76	6.38

UNCONSOLIDATED UNDRAINED TRIAXIAL TEST



Project Name : L. GUADALUPE RIVER F. C.
Project No : 973017NB   Boring No : WB-6   Sample No : 15-4
Test Date : 07/24/98   Test No : WB6-15-4   Depth : 25-26.5 ft
Description : lt. brown sandy silty clay

UNCONSOLIDATED UNDRAINED TRIAXIAL TEST

Project : L. GUADALUPE RIVER F. C.	Location : SAN JOSE, CA	
Project No. : 973017NB	Test No. : WB6-15-4	
Boring No. : WB-6	Test Date : 07/24/98	Tested by : C. WASON
Sample No. : 15-4	Depth : 25-26.5 ft	Checked by : S. CAPPS
Sample Type : MOD CAL	Elevation :	

Soil Description : lt. brown sandy silty clay
Remarks : Dry Unit Weight = 98.72 pcf

Height : 3.701 (in)	Piston Diameter : 0.000 (in)	Quality of Sample : GOOD
Area : 2.96 (in^2)	Piston Friction : 0.00 (lb)	Unit Weight : 124.18 (lb/ft^3)
Volume : 10.94 (in^3)	Piston Weight : 0.00 (gm)	Cell Pressure : 25.00 (lb/in^2)

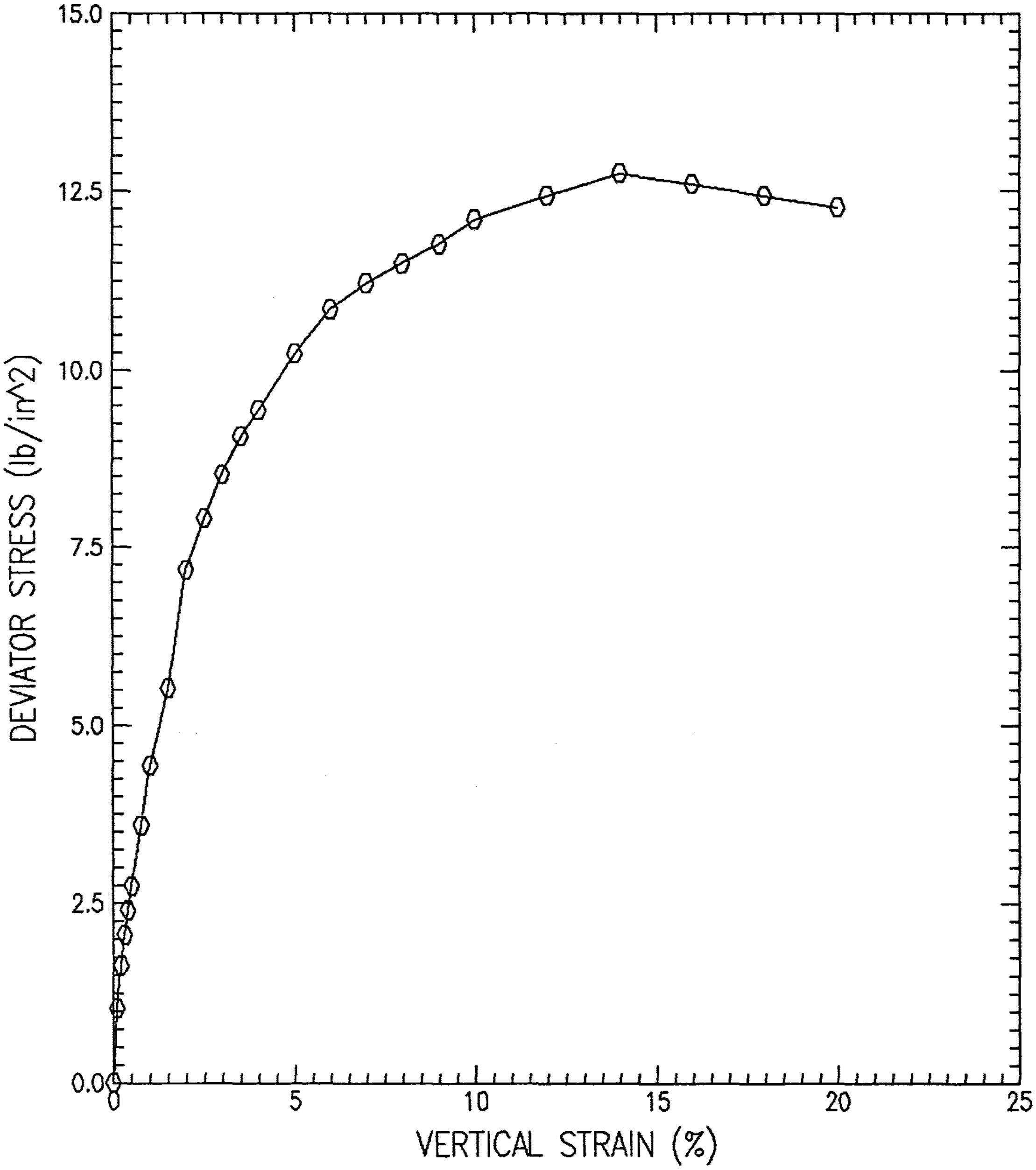
	WATER CONTENT BEFORE TEST	AFTER TEST	TRIMMINGS
CONTAINER NO.			
WT CONTAINER + WET SOIL (gm)	356.60	356.60	0.00
WT CONTAINER + DRY SOIL (gm)	283.60	283.60	0.00
WT WATER (gm)	73.00	73.00	0.00
WT CONTAINER (gm)	0.00	0.00	0.00
WT DRY SOIL (gm)	283.60	283.60	0.00
WATER CONTENT (%)	25.74	25.74	0.00

UNCONSOLIDATED UNDRAINED TRIAXIAL TEST

Project : L. GUADALUPE RIVER F. C.
Location : SAN JOSE, CA
Project No. : 973017NB
Test No. : WB6-15-4
Boring No. : WB-6
Test Date : 07/24/98
Tested by : C. WASON
Sample No. : 15-4
Depth : 25-26.5 ft
Checked by : S. CAPPS
Sample Type : MOD CAL
Elevation :
Soil Description : lt. brown sandy silty clay
Remarks : Dry Unit Weight = 98.72 pcf

	AXIAL COMPRESSION (in)	AXIAL STRAIN (%)	LOAD (lb)	CORR. LOAD ON SAMPLE (lb)	VERTICAL STRESS (lb/in^2)	SHEAR STRESS (lb/in^2)
1)	0.000	0.00	0.00	0.00	25.00	0.00
2)	0.004	0.11	4.43	4.43	26.50	0.75
3)	0.007	0.19	5.21	5.21	26.76	0.88
4)	0.011	0.30	5.65	5.65	26.91	0.95
5)	0.015	0.41	5.76	5.76	26.94	0.97
6)	0.019	0.51	6.09	6.09	27.05	1.03
7)	0.028	0.76	6.32	6.32	27.12	1.06
8)	0.037	1.00	6.76	6.76	27.26	1.13
9)	0.056	1.51	7.87	7.87	27.62	1.31
10)	0.074	2.00	8.97	8.97	27.98	1.49
11)	0.093	2.51	10.30	10.30	28.40	1.70
12)	0.111	3.00	12.19	12.19	29.00	2.00
13)	0.130	3.51	13.85	13.85	29.52	2.26
14)	0.148	4.00	15.29	15.29	29.97	2.48
15)	0.185	5.00	17.95	17.95	30.77	2.88
16)	0.222	6.00	20.50	20.50	31.52	3.26
17)	0.259	7.00	22.71	22.71	32.15	3.57
18)	0.296	8.00	23.27	23.27	32.24	3.62
19)	0.333	9.00	24.93	24.93	32.68	3.84
20)	0.370	10.00	27.70	27.70	33.43	4.22
21)	0.444	12.00	31.25	31.25	34.30	4.65
22)	0.518	14.00	34.90	34.90	35.15	5.08
23)	0.592	16.00	37.67	37.67	35.71	5.35
24)	0.666	18.00	42.66	42.66	36.83	5.92
25)	0.740	19.99	45.98	45.98	37.45	6.22

UNCONSOLIDATED UNDRAINED TRIAXIAL TEST



Project Name : L. GUADALUPE RIVER F. C.
Project No : 973017NB Boring No : WB-8 Sample No : 9
Test Date : 07/24/98 Test No : WB8-9 Depth : 15-17.5 ft
Description : grayish brown silty clay with fine sand

UNCONSOLIDATED UNDRAINED TRIAXIAL TEST

Project : L. GUADALUPE RIVER F. C. Location : SAN JOSE, CA
Project No. : 973017NB Test No. : WB8-9
Boring No. : WB-8 Test Date : 07/24/98 Tested by : C. WASON
Sample No. : 9 Depth : 15-17.5 ft Checked by : S. CAPPS
Sample Type : SHELBY Elevation :
Soil Description : grayish brown silty clay with fine sand
Remarks : Dry Unit Weight = 92.64 pcf

Height : 5.984 (in) Piston Diameter : 0.000 (in) Quality of Sample : GOOD
Area : 6.42 (in^2) Piston Friction : 0.00 (lb) Unit Weight : 121.83 (lb/ft^3)
Volume : 38.44 (in^3) Piston Weight : 0.00 (gm) Cell Pressure : 14.00 (lb/in^2)

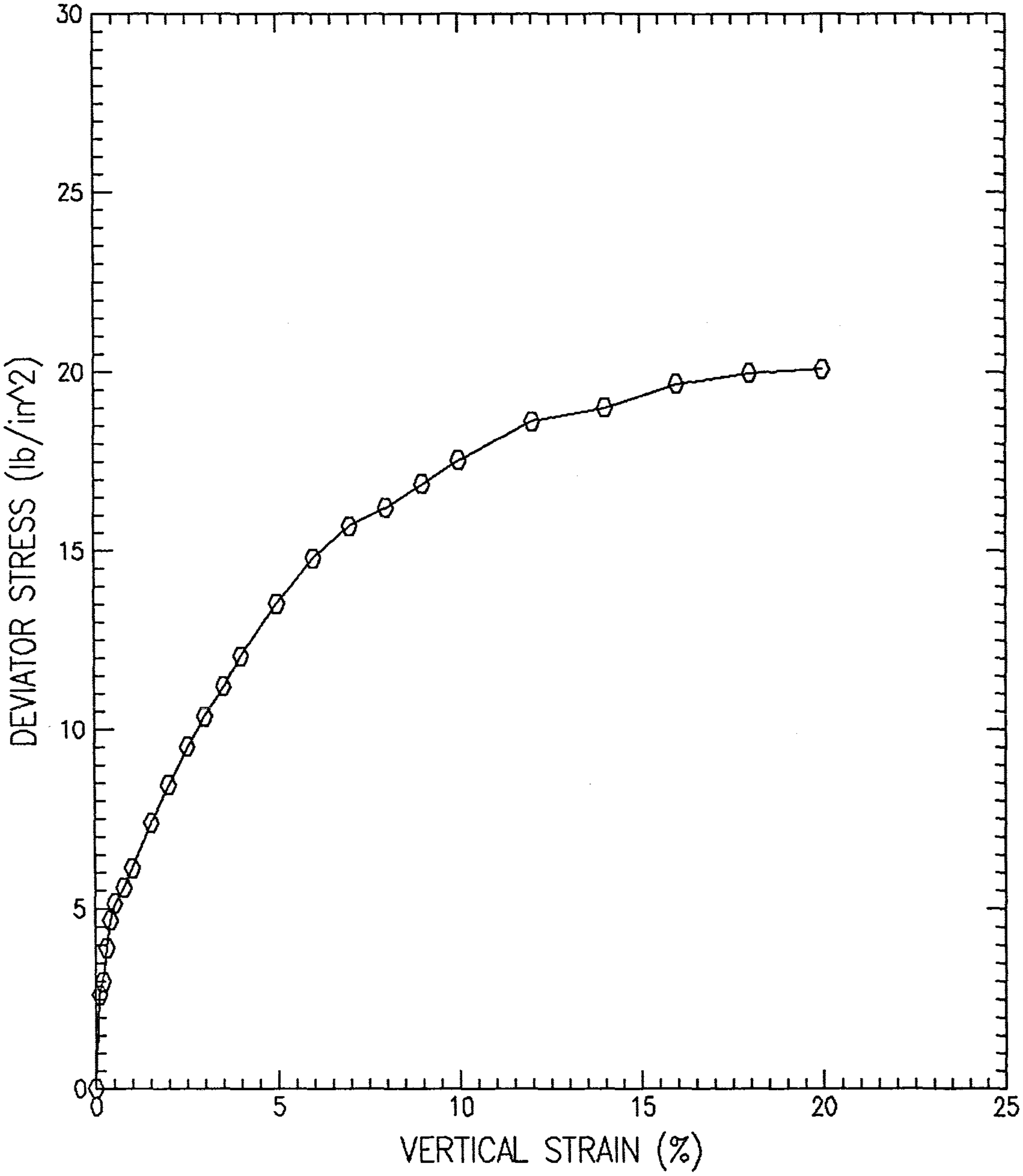
	WATER CONTENT BEFORE TEST	AFTER TEST	TRIMMINGS
CONTAINER NO.			
WT CONTAINER + WET SOIL (gm)	1229.40	1229.40	0.00
WT CONTAINER + DRY SOIL (gm)	935.30	935.30	0.00
WT WATER (gm)	294.10	294.10	0.00
WT CONTAINER (gm)	0.00	0.00	0.00
WT DRY SOIL (gm)	935.30	935.30	0.00
WATER CONTENT (%)	31.44	31.44	0.00

UNCONSOLIDATED UNDRAINED TRIAXIAL TEST

Project : L. GUADALUPE RIVER F. C.
Location : SAN JOSE, CA
Project No. : 973017NB
Test No. : WB8-9
Boring No. : WB-8
Test Date : 07/24/98
Tested by : C. WASON
Sample No. : 9
Depth : 15-17.5 ft
Checked by : S. CAPPS
Sample Type : SHELBY
Elevation :
Soil Description : grayish brown silty clay with fine sand
Remarks : Dry Unit Weight = 92.64 pcf

	AXIAL COMPRESSION (in)	AXIAL STRAIN (%)	LOAD (lb)	CORR. LOAD ON SAMPLE (lb)	VERTICAL STRESS (lb/in^2)	SHEAR STRESS (lb/in^2)
1)	0.000	0.00	0.00	0.00	14.00	0.00
2)	0.006	0.10	6.65	6.65	15.03	0.52
3)	0.012	0.20	10.53	10.53	15.64	0.82
4)	0.018	0.30	13.30	13.30	16.06	1.03
5)	0.024	0.40	15.51	15.51	16.40	1.20
6)	0.030	0.50	17.73	17.73	16.75	1.37
7)	0.045	0.75	23.27	23.27	17.59	1.80
8)	0.060	1.00	28.81	28.81	18.44	2.22
9)	0.090	1.50	36.01	36.01	19.52	2.76
10)	0.120	2.01	47.09	47.09	21.18	3.59
11)	0.150	2.51	52.08	52.08	21.90	3.95
12)	0.180	3.01	56.51	56.51	22.53	4.27
13)	0.209	3.49	60.39	60.39	23.07	4.54
14)	0.239	3.99	63.16	63.16	23.44	4.72
15)	0.299	5.00	69.25	69.25	24.24	5.12
16)	0.359	6.00	74.24	74.24	24.86	5.43
17)	0.419	7.00	77.56	77.56	25.23	5.61
18)	0.479	8.00	80.33	80.33	25.50	5.75
19)	0.539	9.01	83.10	83.10	25.77	5.89
20)	0.598	9.99	86.42	86.42	26.11	6.05
21)	0.718	12.00	90.86	90.86	26.45	6.22
22)	0.838	14.00	95.29	95.29	26.76	6.38
23)	0.957	15.99	96.40	96.40	26.61	6.30
24)	1.077	18.00	97.50	97.50	26.45	6.22
25)	1.197	20.00	98.61	98.61	26.28	6.14

UNCONSOLIDATED UNDRAINED TRIAXIAL TEST



Project Name : L. GUADALUPE RIVER F. C.
Project No : 973017NB   Boring No : WB-11   Sample No : 6-4
Test Date : 07/24/98   Test No : WB11-6-4   Depth : 14-15.5 ft
Description : dark brown silty clay with fine sand & organics

UNCONSOLIDATED UNDRAINED TRIAXIAL TEST

Project : L. GUADALUPE RIVER F. C.
Location : SAN JOSE, CA
Project No. : 973017NB
Test No. : WB11-6-4
Boring No. : WB-11
Test Date : 07/24/98
Tested by : C. WASON
Sample No. : 6-4
Depth : 14-15.5 ft
Checked by : S. CAPPS
Sample Type : MOD CAL
Elevation :
Soil Description : dark brown silty clay with fine sand & organics
Remarks : Dry Unit Weight = 91.1 pcf

	AXIAL COMPRESSION (in)	AXIAL STRAIN (%)	LOAD (lb)	CORR. LOAD ON SAMPLE (lb)	VERTICAL STRESS (lb/in^2)	SHEAR STRESS (lb/in^2)
1)	0.000	0.00	0.00	0.00	15.00	0.00
2)	0.004	0.11	7.76	7.76	17.62	1.31
3)	0.007	0.19	8.86	8.86	17.99	1.50
4)	0.011	0.30	11.63	11.63	18.92	1.96
5)	0.015	0.41	13.85	13.85	19.67	2.33
6)	0.019	0.51	15.29	15.29	20.15	2.57
7)	0.028	0.76	16.62	16.62	20.58	2.79
8)	0.037	1.00	18.28	18.28	21.12	3.06
9)	0.056	1.51	22.16	22.16	22.38	3.69
10)	0.074	2.00	25.48	25.48	23.45	4.22
11)	0.093	2.51	28.81	28.81	24.50	4.75
12)	0.111	3.00	31.58	31.58	25.36	5.18
13)	0.130	3.51	34.35	34.35	26.21	5.61
14)	0.148	4.00	37.12	37.12	27.06	6.03
15)	0.185	5.00	42.10	42.10	28.53	6.77
16)	0.222	6.00	46.54	46.54	29.80	7.40
17)	0.259	7.00	49.86	49.86	30.69	7.84
18)	0.296	8.00	52.08	52.08	31.21	8.10
19)	0.333	9.00	54.85	54.85	31.89	8.44
20)	0.370	10.00	57.62	57.62	32.54	8.77
21)	0.444	12.00	62.60	62.60	33.64	9.32
22)	0.518	14.00	65.37	65.37	34.02	9.51
23)	0.592	16.00	69.25	69.25	34.68	9.84
24)	0.666	18.00	72.02	72.02	34.98	9.99
25)	0.740	19.99	74.24	74.24	35.09	10.05

UNCONSOLIDATED UNDRAINED TRIAXIAL TEST

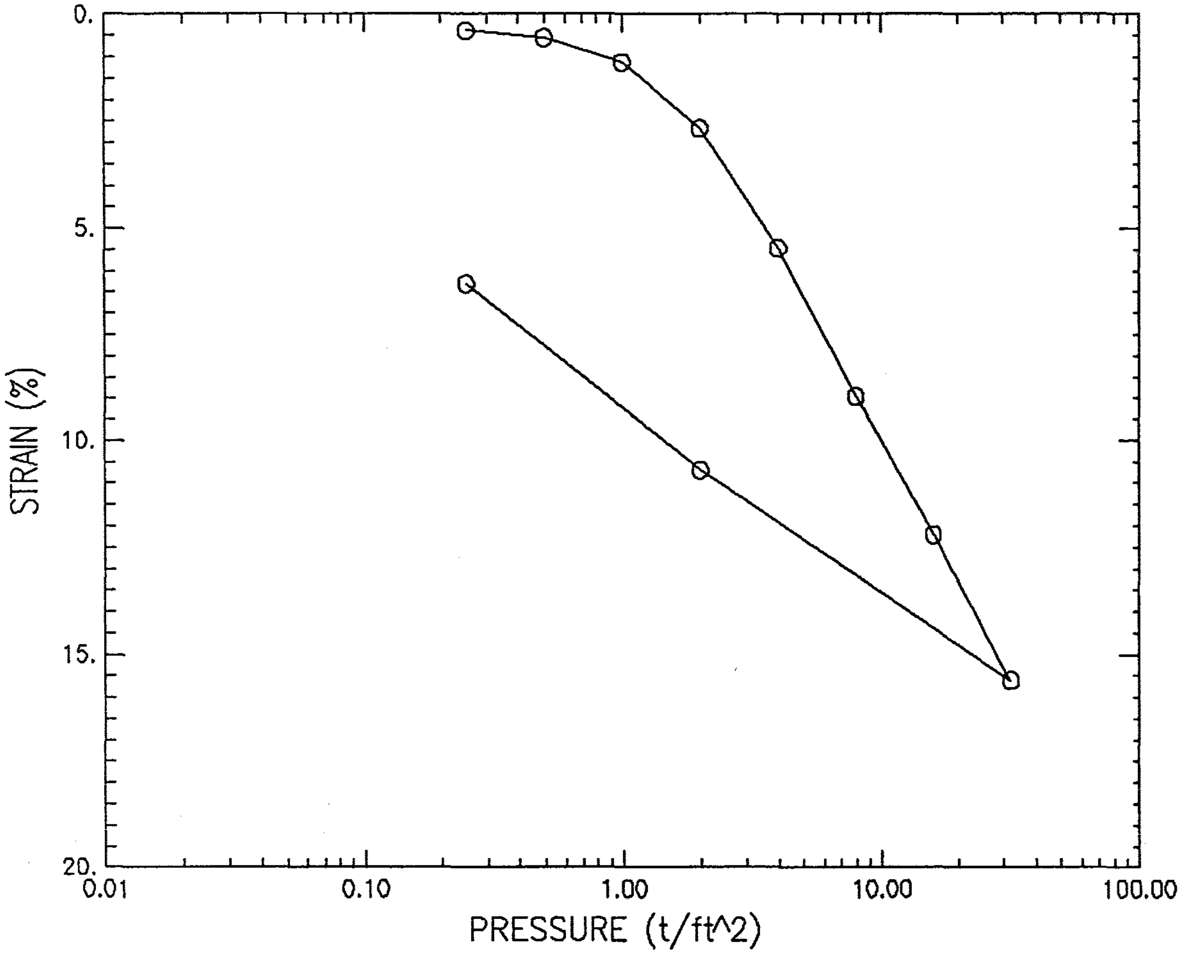
Project : L. GUADALUPE RIVER F. C.	Location : SAN JOSE, CA	
Project No. : 973017NB	Test No. : WB11-6-4	
Boring No. : WB-11	Test Date : 07/24/98	Tested by : C. WASON
Sample No. : 6-4	Depth : 14-15.5 ft	Checked by : S. CAPPS
Sample Type : MOD CAL	Elevation :	

Soil Description : dark brown silty clay with fine sand & organics
Remarks : Dry Unit Weight = 91.1 pcf

Height : 3.701 (in)	Piston Diameter : 0.000 (in)	Quality of Sample : GOOD
Area : 2.96 (in^2)	Piston Friction : 0.00 (lb)	Unit Weight : 117.42 (lb/ft^3)
Volume : 10.94 (in^3)	Piston Weight : 0.00 (gm)	Cell Pressure : 15.00 (lb/in^2)

	WATER CONTENT BEFORE TEST	AFTER TEST	TRIMMINGS
CONTAINER NO.			
WT CONTAINER + WET SOIL (gm)	337.20	337.20	0.00
WT CONTAINER + DRY SOIL (gm)	261.70	261.70	0.00
WT WATER (gm)	75.50	75.50	0.00
WT CONTAINER (gm)	0.00	0.00	0.00
WT DRY SOIL (gm)	261.70	261.70	0.00
WATER CONTENT (%)	28.85	28.85	0.00

SECTION 3



			BEFORE TEST	AFTER TEST
OVERBURDEN PRESSURE (t/ft^2)		WATER CONTENT (%)	25.343	22.057
PRECONSOL. PRESSURE (t/ft^2)		DRY DENSITY (lb/ft^3)	100.808	107.579
COMPRESSION INDEX		SATURATION (%)	97.635	99.990
TYPE SPECIMEN		VOID RATIO	0.722	0.613
DIA. (in) 2.429	HT. (in) 0.958	BACK PRESSURE (t/ft^2)		
CLASSIFICATION MOTTLED GRAY BRN CLAY W/ SAND, CALC CARBONATED NOD				
LL 0.0	PL 0.0	PI 0.0	PROJECT LOWER GUADALUPE RIVER	
GS 2.780	D_{10}	Data File: EB1-13.CON		
REMARKS		BORING NO. EB-1	SAMPLE NO. 13	
		DEPTH 22-24.5 FT	DATE 06/16/98	

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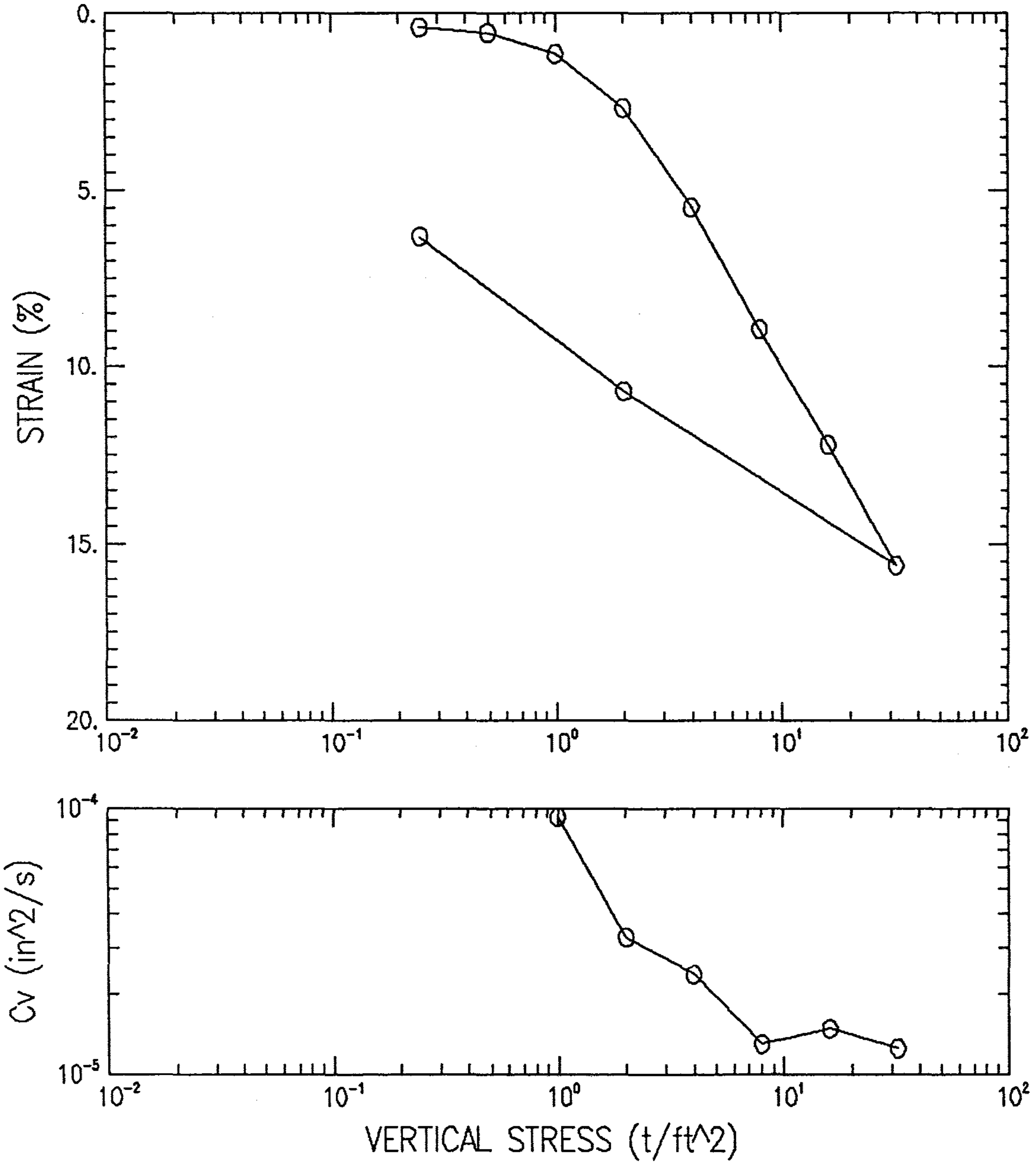
CONSOLIDATION TEST REPORT

CONSOLIDATION TEST
SUMMARY REPORT



Woodward Clyde Consultants
Project Name : LOWER GUADALUPE RIVER
Project No : 973017NB   Boring No : EB-1   Sample No : 13
Test Date : 06/16/98   Test No : EB1-13   Depth : 22-24.5 FT
Description : MOTTLED GRAY BRN CLAY W/ SAND, CALC CARBONATED NOD

CONSOLIDATION TEST DATA

Project : LOWER GUADALUPE RIVER Location : SAN JOSE, CA Project No. : 973017NB
Test No. : EB1-13
Boring No. : EB-1 Test Date : 06/16/98 Tested by : C. WASON
Sample No. : 13 Sample Type : SHELBY Depth : 22-24.5 FT
Checked by : C. CAPPS
Soil Description : MOTTLED GRAY BRN CLAY W/ SAND, CALC CARBONATED NOD
Remarks : TRIMMED FROM 2.86 DOWN TO 2.429 INCHES IN DIAMETER

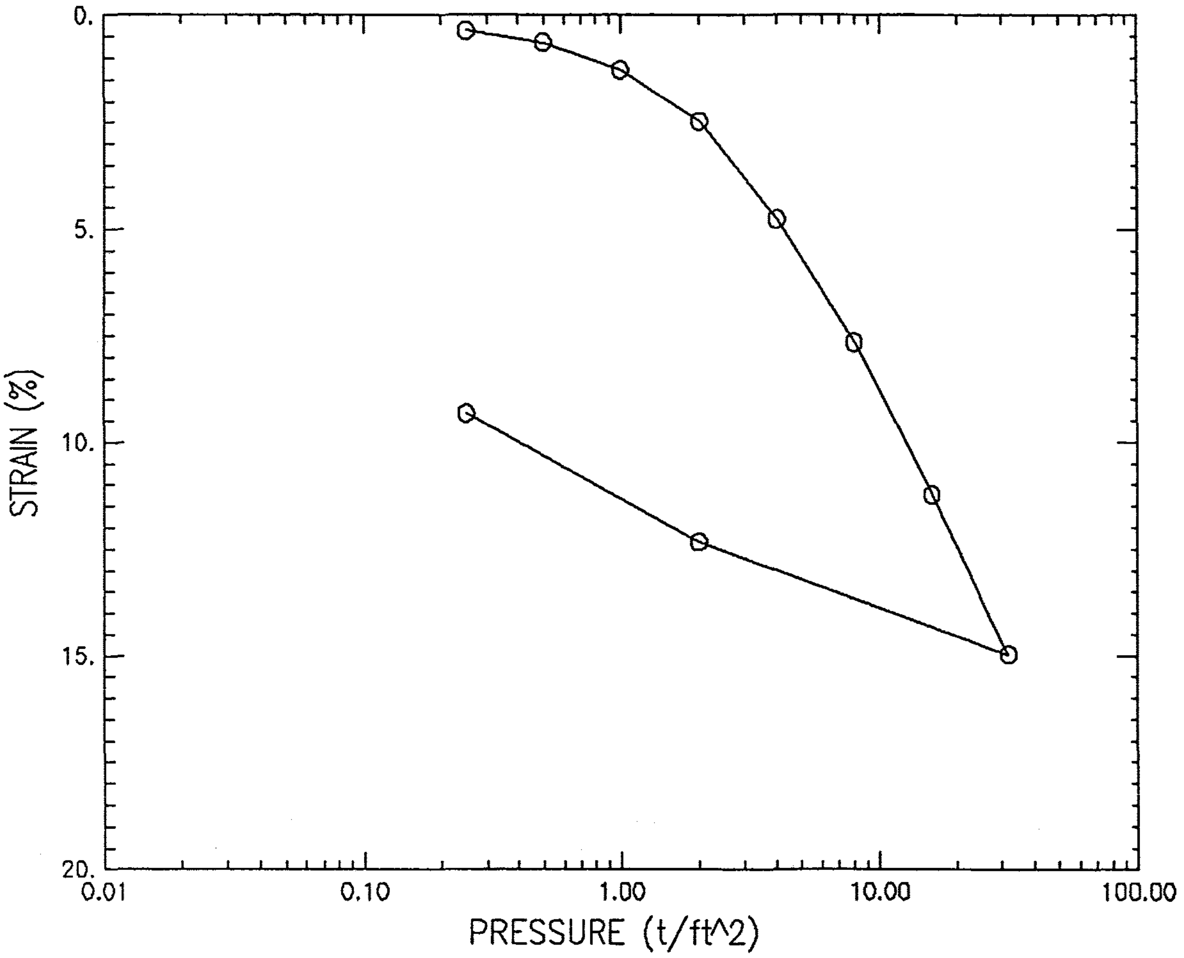
	APPLIED PRESSURE (t/ft^2)	FINAL DISPLACEMENT (in)	VOID RATIO	STRAIN AT END (%)	FITTING TIME (min)		COEFFICIENT OF CONSOLIDATION (in^2/s)		
					SQ.RT.	LOG	SQ.RT.	LOG	AVE
1)	0.25	0.004	0.715	0.39	0.0	0.0	0.00E+000	0.00E+000	0.00E+000
2)	0.50	0.005	0.712	0.55	0.0	0.0	0.00E+000	0.00E+000	0.00E+000
3)	1.00	0.011	0.702	1.13	8.0	0.0	9.29E-005	0.00E+000	0.00E+000
4)	2.00	0.025	0.676	2.66	22.2	0.0	3.27E-005	0.00E+000	0.00E+000
5)	4.00	0.052	0.628	5.46	29.2	0.0	2.37E-005	0.00E+000	0.00E+000
6)	8.00	0.086	0.568	8.95	50.0	0.0	1.30E-005	0.00E+000	0.00E+000
7)	16.00	0.117	0.511	12.22	40.6	0.0	1.48E-005	0.00E+000	0.00E+000
8)	32.00	0.149	0.453	15.60	44.7	0.0	1.25E-005	0.00E+000	0.00E+000
9)	2.00	0.103	0.537	10.70	0.0	0.0	0.00E+000	0.00E+000	0.00E+000
10)	0.25	0.060	0.613	6.31	0.0	0.0	0.00E+000	0.00E+000	0.00E+000

CONSOLIDATION TEST DATA

Project : LOWER GUADALUPE RIVER Location : SAN JOSE, CA Project No. : 973017NB
Test No. : EB1-13
Boring No. : EB-1 Test Date : 06/16/98 Tested by : C. WASON
Sample No. : 13 Sample Type : SHELBY Depth : 22-24.5 FT
Checked by : C. CAPPS
Soil Description : MOTTLED GRAY BRN CLAY W/ SAND, CALC CARBONATED NOD
Remarks : TRIMMED FROM 2.86 DOWN TO 2.429 INCHES IN DIAMETER

Liquid Limit : 0 Plastic Limit : 0 Plasticity Index : 0
Specific Gravity : 2.78 Initial Height : 0.96 Sample Diameter : 2.43 (in)
Initial Void Ratio : 0.7217 Weight of Piston and top cap : 0.00 (gm)

	TRIMMINGS	SPECIMEN + RING BEFORE	SPECIMEN + RING AFTER	AFTER
CONTAINER NO.		RING	RING	
WT CONTAINER + WET SOIL (gm)	278.78	330.96	327.10	327.10
WT CONTAINER + DRY SOIL (gm)	243.09	301.19	301.19	301.19
WT CONTAINER (gm)	102.23	183.72	183.72	183.72
WT DRY SOIL (gm)	140.86	117.47	117.47	117.47
WATER CONTENT (%)	25.34	25.34	22.06	22.06
VOID RATIO	------	0.72	0.61	------
DEGREE OF SATURATION (%)	------	97.64	99.99	------
DRY DENSITY (lb/ft^3)	------	100.81	107.58	------



			BEFORE TEST	AFTER TEST
OVERBURDEN PRESSURE (t/ft^2)		WATER CONTENT (%)	22.215	17.972
PRECONSOL. PRESSURE (t/ft^2)		DRY DENSITY (lb/ft^3)	103.425	114.051
COMPRESSION INDEX		SATURATION (%)	94.148	99.997
TYPE SPECIMEN		VOID RATIO	0.642	0.489
DIA. (in) 2.430	HT. (in) 0.970	BACK PRESSURE (t/ft^2)		

CLASSIFICATION DRK BROWN-GRAY CLAY W/ SAND, F-GRAVEL AND NODULES	
LL 0.0 PL 0.0 PI 0.0	PROJECT LOWER GUADALUPE RIVER
GS 2.720 D 10	Data File: EB2-12.CON
REMARKS	BORING NO. EB-2 SAMPLE NO. 12
	DEPTH 16.5-19 FT DATE 06/16/98

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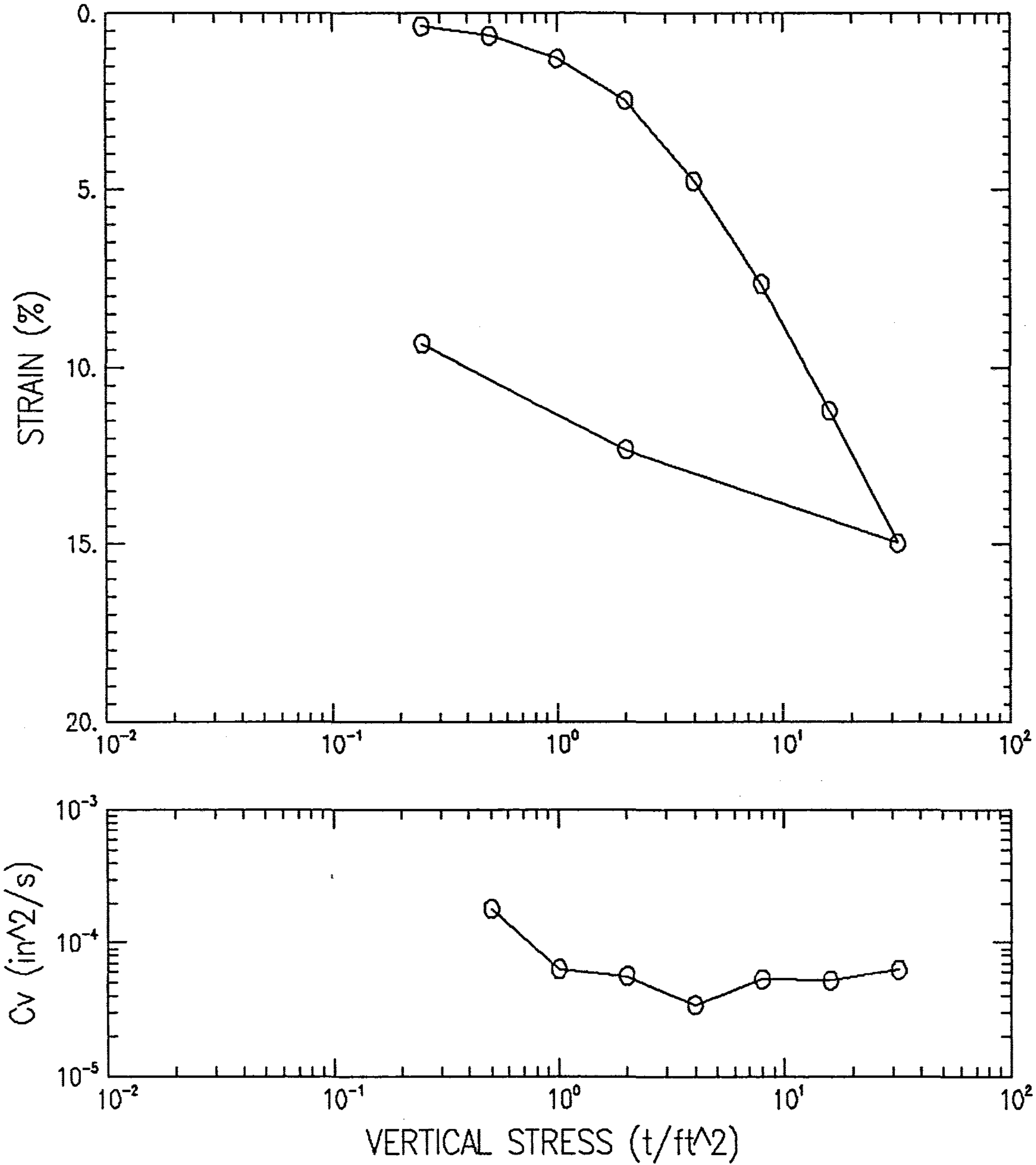
CONSOLIDATION TEST REPORT

CONSOLIDATION TEST
SUMMARY REPORT



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Project Name : LOWER GUADALUPE RIVER

Project No : 973017NB   Boring No : EB-2   Sample No : 12

Test Date : 06/16/98   Test No : EB2-12   Depth : 16.5-19 FT

Description : DRK BROWN-GRAY CLAY W/ SAND, F-GRAVEL AND NODULES

CONSOLIDATION TEST DATA

Project : LOWER GUADALUPE RIVER Location : SAN JOSE, CA Project No. : 973017NB
Test No. : EB2-12
Boring No. : EB-2 Test Date : 06/16/98 Tested by : C. WASON
Sample No. : 12 Sample Type : SHELBY Depth : 16.5-19 FT
Checked by : C. CAPPS
Soil Description : DRK BROWN-GRAY CLAY W/ SAND, F-GRAVEL AND NODULES
Remarks : TRIMMED FROM 2.86 DOWN TO 2.43 INCHES IN DIAMETER

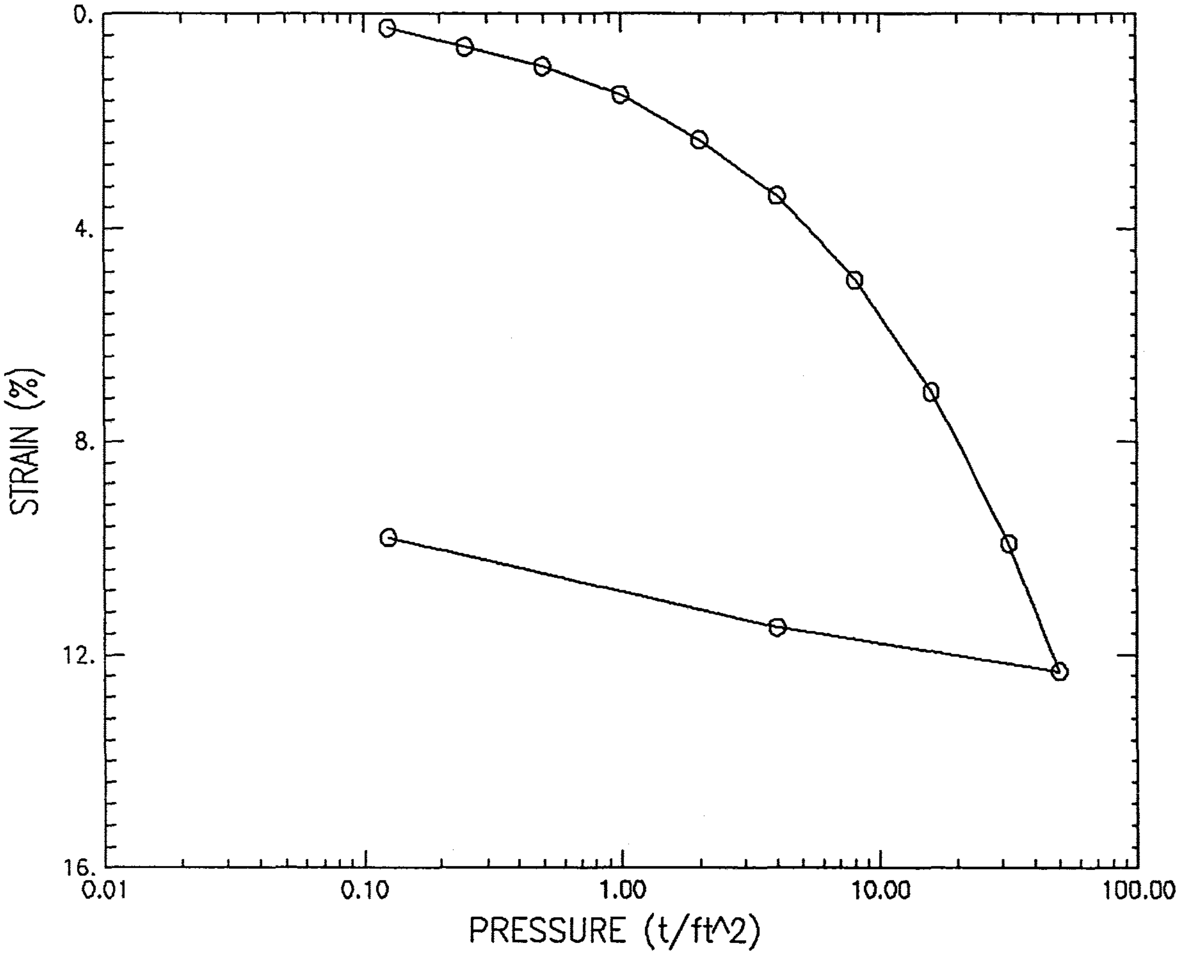
	APPLIED PRESSURE (t/ft^2)	FINAL DISPLACEMENT (in)	VOID RATIO	STRAIN AT END (%)	FITTING TIME (min)		COEFFICIENT OF CONSOLIDATION (in^2/s)		
					SQ.RT.	LOG	SQ.RT.	LOG	AVE
1)	0.25	0.003	0.636	0.36	0.0	0.0	0.00E+000	0.00E+000	0.00E+000
2)	0.50	0.006	0.631	0.63	4.3	0.0	1.80E-004	0.00E+000	0.00E+000
3)	1.00	0.012	0.621	1.27	12.0	0.0	6.32E-005	0.00E+000	0.00E+000
4)	2.00	0.024	0.601	2.47	13.3	0.0	5.60E-005	0.00E+000	0.00E+000
5)	4.00	0.046	0.564	4.76	21.0	0.0	3.41E-005	0.00E+000	0.00E+000
6)	8.00	0.074	0.516	7.65	12.8	0.0	5.31E-005	0.00E+000	0.00E+000
7)	16.00	0.109	0.458	11.22	12.1	0.0	5.22E-005	0.00E+000	0.00E+000
8)	32.00	0.145	0.396	14.97	9.3	0.0	6.25E-005	0.00E+000	0.00E+000
9)	2.00	0.119	0.440	12.32	0.0	0.0	0.00E+000	0.00E+000	0.00E+000
10)	0.25	0.090	0.489	9.32	0.0	0.0	0.00E+000	0.00E+000	0.00E+000

CONSOLIDATION TEST DATA

Project : LOWER GUADALUPE RIVER
Location : SAN JOSE, CA
Project No. : 973017NB
Test No. : EB2-12
Boring No. : EB-2
Test Date : 06/16/98
Tested by : C. WASON
Sample No. : 12
Sample Type : SHELBY
Depth : 16.5-19 FT
Checked by : C. CAPPS
Soil Description : DRK BROWN-GRAY CLAY W/ SAND, F-GRAVEL AND NODULES
Remarks : TRIMMED FROM 2.86 DOWN TO 2.43 INCHES IN DIAMETER

Liquid Limit : 0
Plastic Limit : 0
Plasticity Index : 0
Specific Gravity : 2.72
Initial Height : 0.97
Sample Diameter : 2.43 (in)
Initial Void Ratio : 0.6419
Weight of Piston and top cap : 0.00 (gm)

	TRIMMINGS	SPECIMEN + RING BEFORE	SPECIMEN + RING AFTER	AFTER
CONTAINER NO.		RING	RING	
WT CONTAINER + WET SOIL (gm)	312.30	335.70	330.52	330.52
WT CONTAINER + DRY SOIL (gm)	273.92	308.58	308.58	308.58
WT CONTAINER (gm)	101.10	186.50	186.50	186.50
WT DRY SOIL (gm)	172.82	122.08	122.08	122.08
WATER CONTENT (%)	22.21	22.21	17.97	17.97
VOID RATIO	------	0.64	0.49	------
DEGREE OF SATURATION (%)	------	94.15	100.00	------
DRY DENSITY (lb/ft^3)	------	103.43	114.05	------



			BEFORE TEST	AFTER TEST
OVERBURDEN PRESSURE (t/ft^2)		WATER CONTENT (%)	25.443	19.877
PRECONSOL. PRESSURE (t/ft^2)		DRY DENSITY (lb/ft^3)	100.811	111.779
COMPRESSION INDEX		SATURATION (%)	98.030	99.992
TYPE SPECIMEN		VOID RATIO	0.722	0.553
DIA. (in) 2.430	HT. (in) 0.965	BACK PRESSURE (t/ft^2)		

CLASSIFICATION GRAY CLAYEY SILTY FINE SAND TO CLAYEY SANDY SILT		
LL 0.0	PL 0.0	PI 0.0

PROJECT LOWER GUADALUPE RIVER	
GS 2.780	D_{10}
Data File: EB4–17.CON	
REMARKS	
BORING NO. EB–4	SAMPLE NO. 17
DEPTH 41–43.5 FT	DATE 06/16/98

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CONSOLIDATION TEST REPORT

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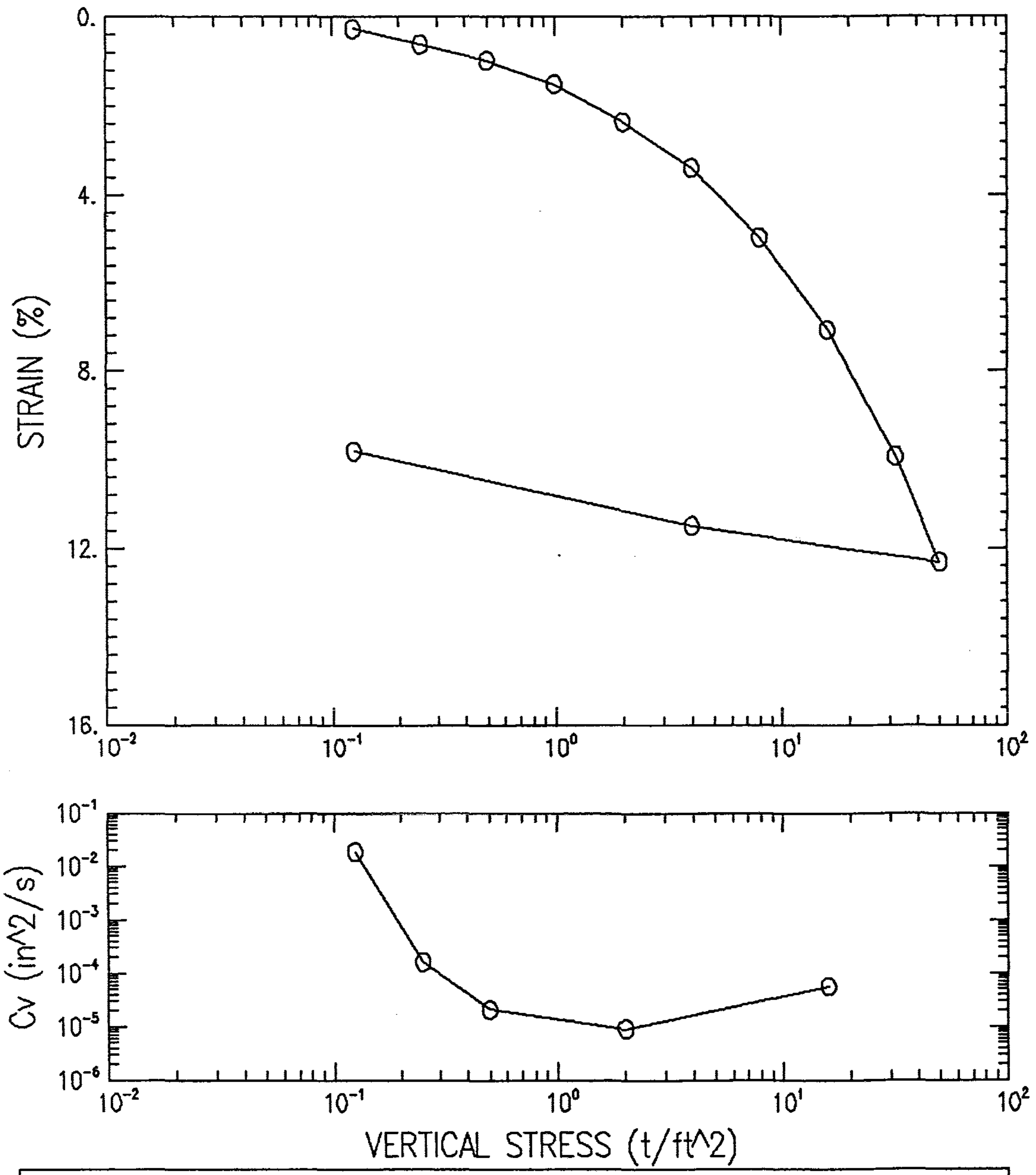
SUMMARY REPORT



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Project Name : LOWER GUADALUPE RIVER
Project No : 973017NB Boring No : EB-4 Sample No : 17
Test Date : 06/16/98 Test No : EB4-17 Depth : 41-43.5 FT
Description : GRAY CLAYEY SILTY FINE SAND TO CLAYEY SANDY SILT

CONSOLIDATION TEST DATA

Project : LOWER GUADALUPE RIVER Location : SAN JOSE, CA Project No. : 973017NB
Test No. : EB4-17
Boring No. : EB-4 Test Date : 06/16/98 Tested by : C. WASON
Sample No. : 17 Sample Type : SHELBY Depth : 41-43.5 FT
Checked by : C. CAPPS
Soil Description : GRAY CLAYEY SILTY FINE SAND TO CLAYEY SANDY SILT
Remarks : TRIMMED FROM 2.86 DOWN TO 2.43 INCHES IN DIAMETER

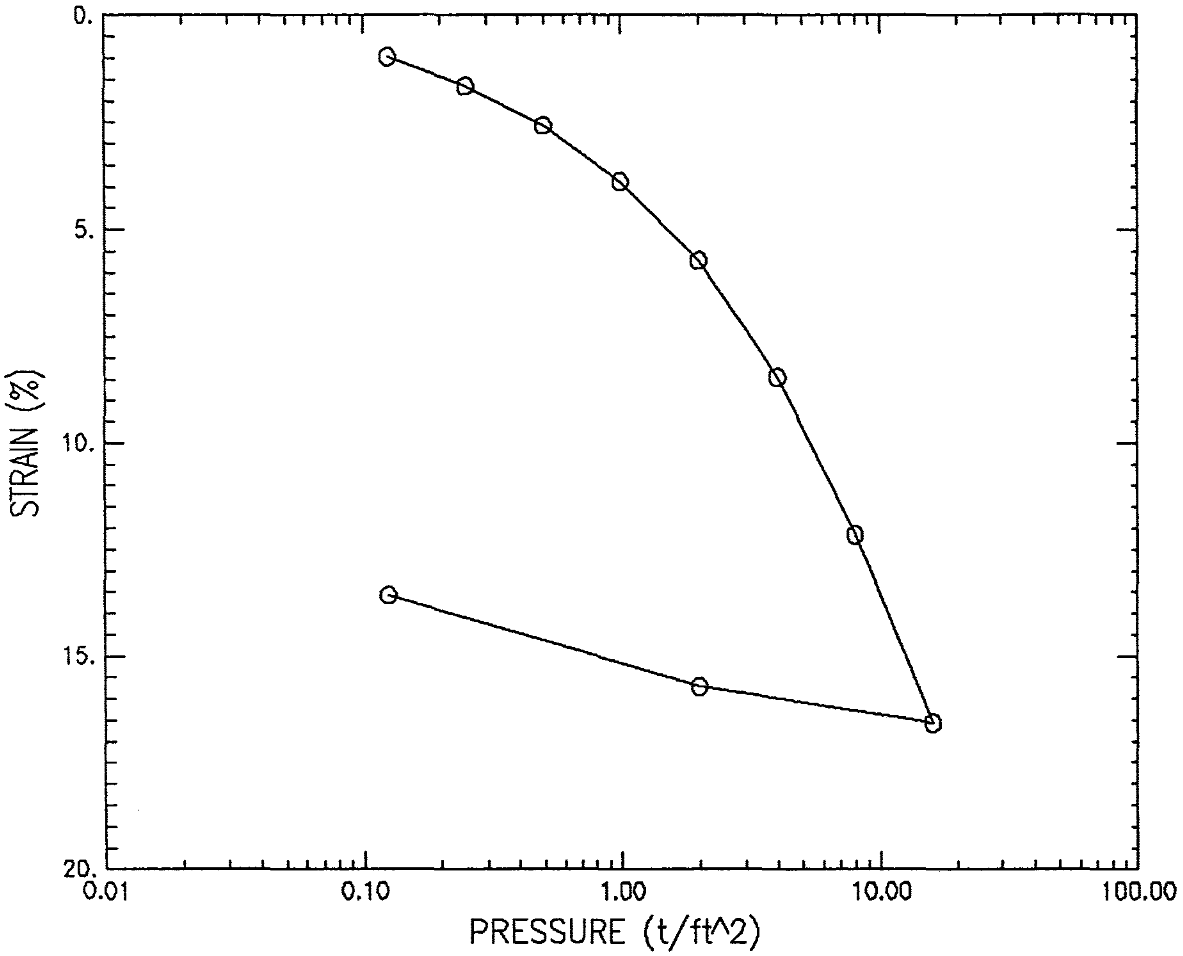
	APPLIED PRESSURE (t/ft^2)	FINAL DISPLACEMENT (in)	VOID RATIO	STRAIN AT END (%)	FITTING TIME (min)		COEFFICIENT OF CONSOLIDATION (in^2/s)		
					SQ.RT.	LOG	SQ.RT.	LOG	AVE
1)	0.13	0.003	0.717	0.26	0.0	0.0	1.85E-002	0.00E+000	0.00E+000
2)	0.25	0.006	0.711	0.61	4.6	0.0	1.64E-004	0.00E+000	0.00E+000
3)	0.50	0.009	0.705	0.97	36.0	0.0	2.09E-005	0.00E+000	0.00E+000
4)	1.00	0.014	0.696	1.50	0.0	0.0	0.00E+000	0.00E+000	0.00E+000
5)	2.00	0.023	0.681	2.34	81.4	0.0	9.03E-006	0.00E+000	0.00E+000
6)	4.00	0.033	0.664	3.37	0.0	0.0	0.00E+000	0.00E+000	0.00E+000
7)	8.00	0.048	0.636	4.96	0.0	0.0	0.00E+000	0.00E+000	0.00E+000
8)	16.00	0.068	0.600	7.07	11.9	0.0	5.65E-005	0.00E+000	0.00E+000
9)	32.00	0.096	0.551	9.92	0.0	0.0	0.00E+000	0.00E+000	0.00E+000
10)	50.00	0.119	0.510	12.31	0.0	0.0	0.00E+000	0.00E+000	0.00E+000
11)	4.00	0.111	0.524	11.49	0.0	0.0	0.00E+000	0.00E+000	0.00E+000
12)	0.13	0.095	0.553	9.81	0.0	0.0	0.00E+000	0.00E+000	0.00E+000

CONSOLIDATION TEST DATA

Project : LOWER GUADALUPE RIVER
Location : SAN JOSE, CA
Project No. : 973017NB
Test No. : EB4-17
Boring No. : EB-4
Test Date : 06/16/98
Tested by : C. WASON
Sample No. : 17
Sample Type : SHELBY
Depth : 41-43.5 FT
Checked by : C. CAPPS
Soil Description : GRAY CLAYEY SILTY FINE SAND TO CLAYEY SANDY SILT
Remarks : TRIMMED FROM 2.86 DOWN TO 2.43 INCHES IN DIAMETER

Liquid Limit : 0
Plastic Limit : 0
Plasticity Index : 0
Specific Gravity : 2.78
Initial Height : 0.96
Sample Diameter : 2.43 (in)
Initial Void Ratio : 0.7217
Weight of Piston and top cap : 0.00 (gm)

	TRIMMINGS	SPECIMEN + RING BEFORE	SPECIMEN + RING AFTER	AFTER
CONTAINER NO.		RING	RING	
WT CONTAINER + WET SOIL (gm)	310.31	336.06	329.47	329.47
WT CONTAINER + DRY SOIL (gm)	265.54	305.94	305.94	305.94
WT CONTAINER (gm)	89.56	187.56	187.56	187.56
WT DRY SOIL (gm)	175.98	118.38	118.38	118.38
WATER CONTENT (%)	25.44	25.44	19.88	19.88
VOID RATIO	------	0.72	0.55	------
DEGREE OF SATURATION (%)	------	98.03	99.99	------
DRY DENSITY (lb/ft^3)	------	100.81	111.78	------



			BEFORE TEST	AFTER TEST
OVERBURDEN PRESSURE (t/ft^2)		WATER CONTENT (%)	35.989	26.341
PRECONSOL. PRESSURE (t/ft^2)		DRY DENSITY (lb/ft^3)	85.498	98.922
COMPRESSION INDEX		SATURATION (%)	99.274	99.989
TYPE SPECIMEN		VOID RATIO	0.986	0.717
DIA. (in) 2.430	HT. (in) 0.960	BACK PRESSURE (t/ft^2)		
CLASSIFICATION BROWN SLIGHTLY GRAY CLAYEY SILT				
LL 0.0	PL 0.0 PI 0.0	PROJECT LOWER GUADALUPE RIVER		
GS 2.720	D_{10}	Data File: EB10-7.CON		
REMARKS		BORING NO. EB-10	SAMPLE NO. 7	
		DEPTH 16.5-19 FT	DATE 06/17/98	

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CONSOLIDATION TEST REPORT

CONSOLIDATION TEST
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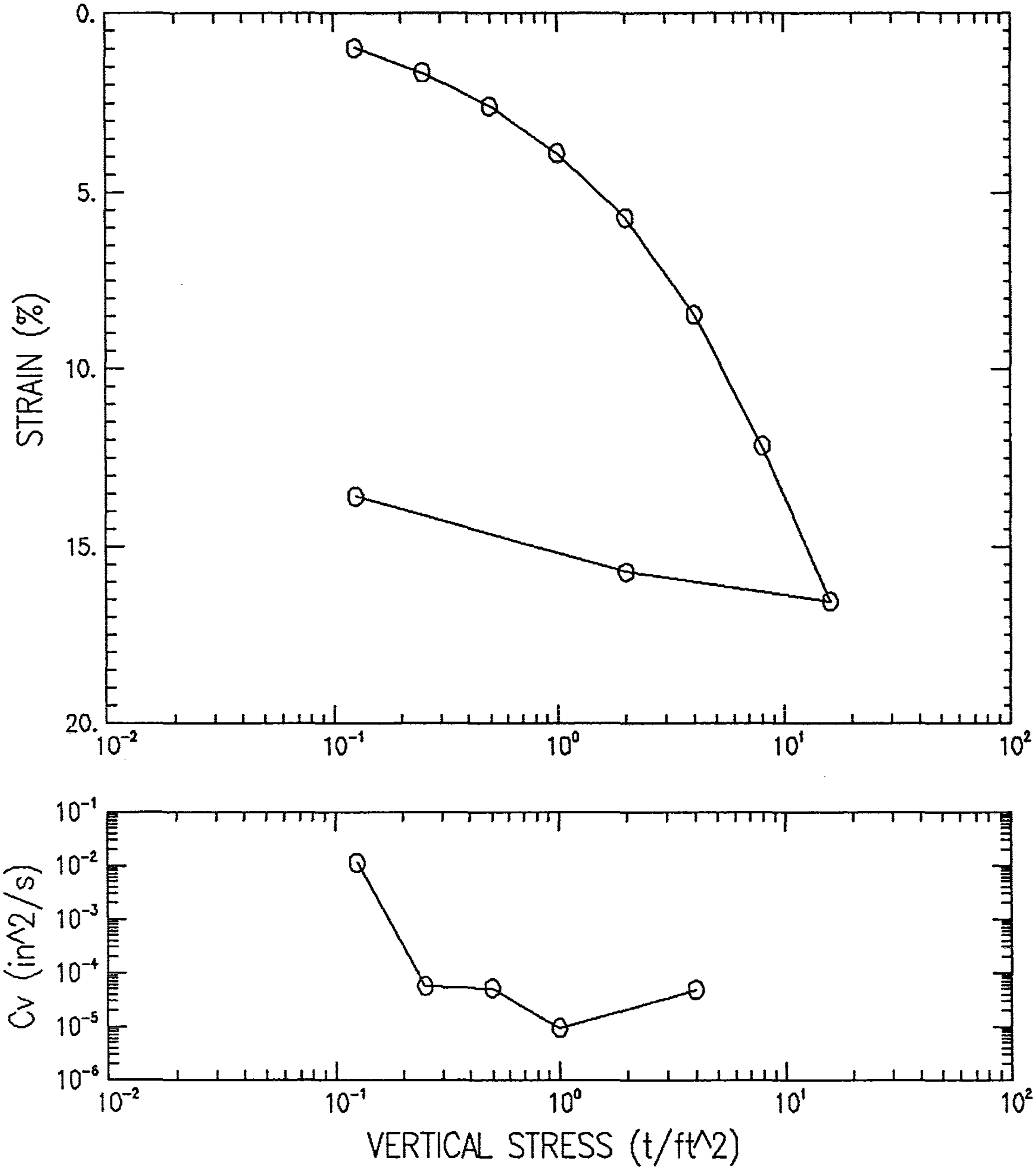

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Project Name : LOWER GUADALUPE RIVER
Project No : 973017NB   Boring No : EB-10   Sample No : 7
Test Date : 06/17/98   Test No : EB10-7   Depth : 16.5-19 FT
Description : BROWN SLIGHTLY GRAY CLAYEY SILT

CONSOLIDATION TEST DATA

Project : LOWER GUADALUPE RIVER Location : SAN JOSE, CA Project No. : 973017NB
Test No. : EB10-7
Boring No. : EB-10 Test Date : 06/17/98 Tested by : C. WASON
Sample No. : 7 Sample Type : SHELBY Depth : 16.5-19 FT
Checked by : C. CAPPS
Soil Description : BROWN SLIGHTLY GRAY CLAYEY SILT
Remarks : TRIMMED FROM 2.86 DOWN TO 2.43 INCHES IN DIAMETER

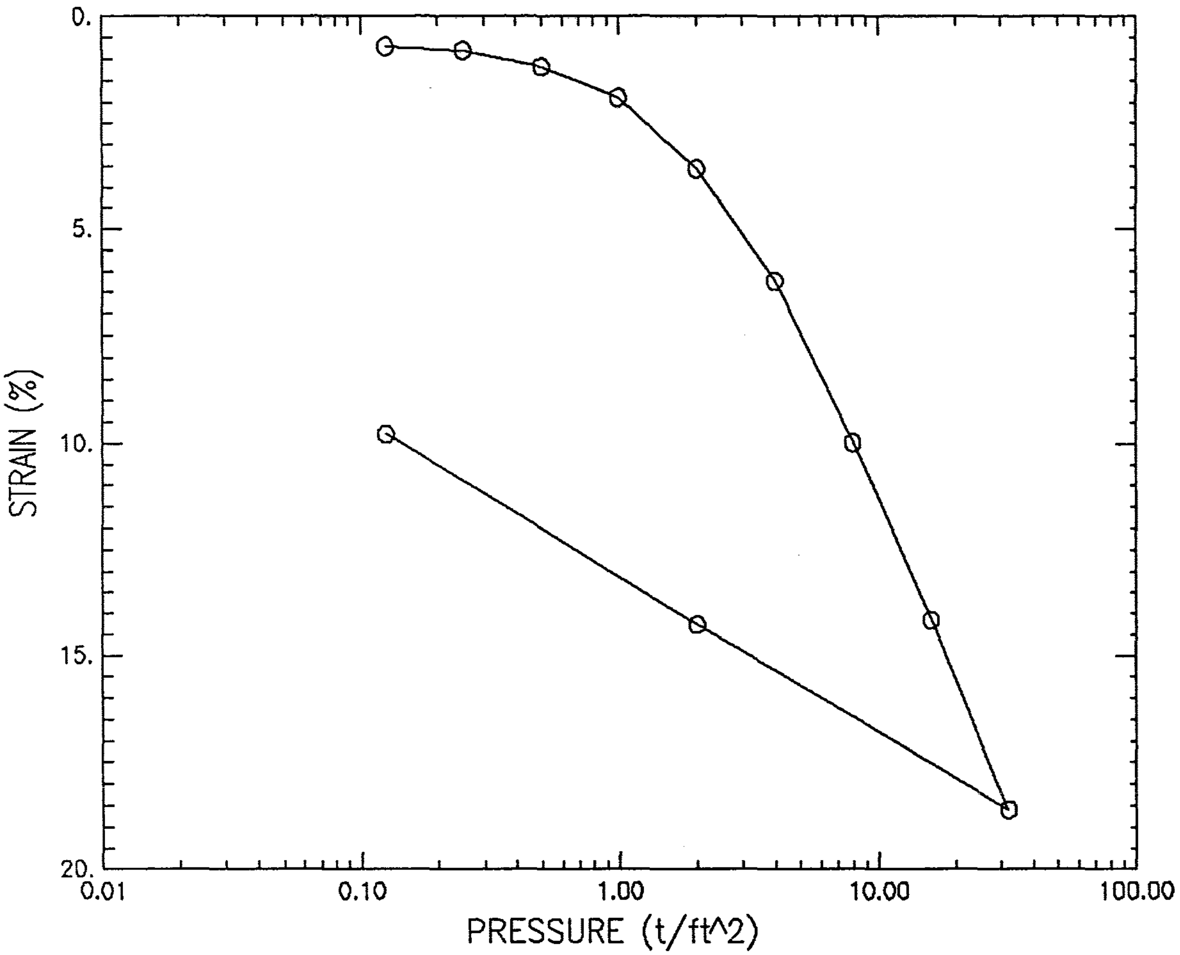
	APPLIED PRESSURE (t/ft^2)	FINAL DISPLACEMENT (in)	VOID RATIO	STRAIN AT END (%)	FITTING TIME (min)		COEFFICIENT OF CONSOLIDATION (in^2/s)		
					SQ.RT.	LOG	SQ.RT.	LOG	AVE
1)	0.13	0.009	0.967	0.97	0.1	0.0	1.14E-002	0.00E+000	0.00E+000
2)	0.25	0.016	0.953	1.65	13.0	0.0	5.67E-005	0.00E+000	0.00E+000
3)	0.50	0.025	0.935	2.57	13.9	0.0	5.21E-005	0.00E+000	0.00E+000
4)	1.00	0.037	0.909	3.88	75.2	0.0	9.43E-006	0.00E+000	0.00E+000
5)	2.00	0.055	0.873	5.70	0.0	0.0	0.00E+000	0.00E+000	0.00E+000
6)	4.00	0.081	0.818	8.45	13.3	0.0	4.91E-005	0.00E+000	0.00E+000
7)	8.00	0.117	0.745	12.15	0.0	0.0	0.00E+000	0.00E+000	0.00E+000
8)	16.00	0.159	0.657	16.56	0.0	0.0	0.00E+000	0.00E+000	0.00E+000
9)	2.00	0.151	0.674	15.71	0.0	0.0	0.00E+000	0.00E+000	0.00E+000
10)	0.13	0.130	0.717	13.57	0.0	0.0	0.00E+000	0.00E+000	0.00E+000

CONSOLIDATION TEST DATA

Project : LOWER GUADALUPE RIVER Location : SAN JOSE, CA Project No. : 973017NB
Test No. : EB10-7
Boring No. : EB-10 Test Date : 06/17/98 Tested by : C. WASON
Sample No. : 7 Sample Type : SHELBY Depth : 16.5-19 FT
Checked by : C. CAPPS
Soil Description : BROWN SLIGHTLY GRAY CLAYEY SILT
Remarks : TRIMMED FROM 2.86 DOWN TO 2.43 INCHES IN DIAMETER

Liquid Limit : 0 Plastic Limit : 0 Plasticity Index : 0
Specific Gravity : 2.72 Initial Height : 0.96 Sample Diameter : 2.43 (in)
Initial Void Ratio : 0.986 Weight of Piston and top cap : 0.00 (gm)

	TRIMMINGS	SPECIMEN + RING BEFORE	SPECIMEN + RING AFTER	AFTER
CONTAINER NO.		RING	RING	
WT CONTAINER + WET SOIL (gm)	316.03	319.58	309.94	309.94
WT CONTAINER + DRY SOIL (gm)	260.73	283.62	283.62	283.62
WT CONTAINER (gm)	107.06	183.70	183.70	183.70
WT DRY SOIL (gm)	153.67	99.92	99.92	99.92
WATER CONTENT (%)	35.99	35.99	26.34	26.34
VOID RATIO	------	0.99	0.72	------
DEGREE OF SATURATION (%)	------	99.27	99.99	------
DRY DENSITY (lb/ft^3)	------	85.50	98.92	------

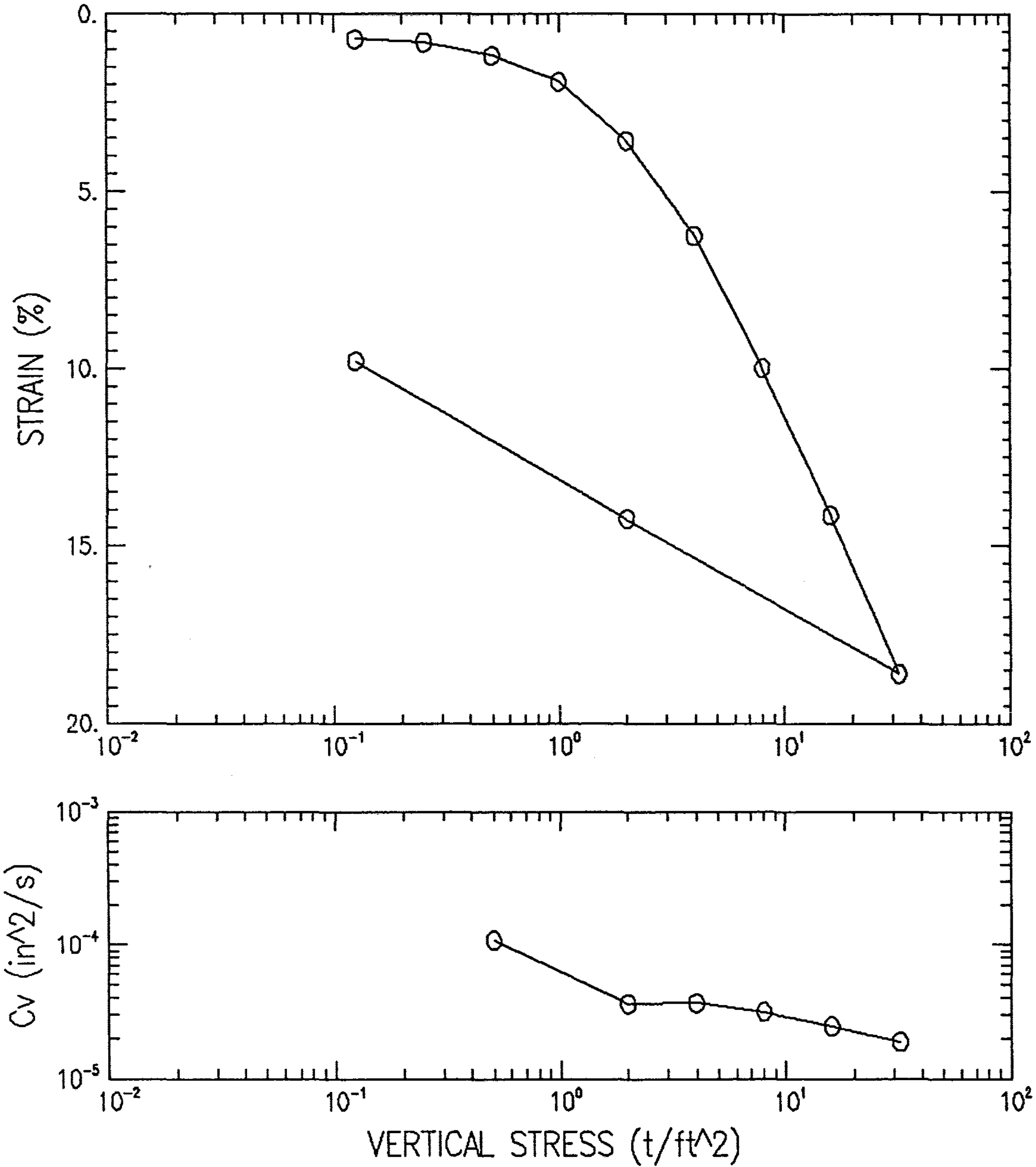


			BEFORE TEST	AFTER TEST
OVERBURDEN PRESSURE (t/ft^2)		WATER CONTENT (%)	35.182	29.045
PRECONSOL. PRESSURE (t/ft^2)		DRY DENSITY (lb/ft^3)	87.320	96.773
COMPRESSION INDEX		SATURATION (%)	97.639	99.988
TYPE SPECIMEN		VOID RATIO	1.016	0.819
DIA. (in) 2.429	HT. (in) 0.954	BACK PRESSURE (t/ft^2)		

CLASSIFICATION DRK GRAY-BRN CLAY W/ TRACES OF ORG AND BLK CARBON			
LL 0.0	PL 0.0	PI 0.0	PROJECT LOWER GUADALUPE RIVER
GS 2.820	D_{10}		Data File: EB14-11.CON
REMARKS		BORING NO. EB-14	SAMPLE NO. 11
		DEPTH 17.5-19 FT	DATE 06/17/98

Woodward Clyde Consultants
CONSOLIDATION TEST REPORT

CONSOLIDATION TEST
SUMMARY REPORT



Woodward Clyde Consultants
Project Name : LOWER GUADALUPE RIVER
Project No : 973017NB Boring No : EB–14 Sample No : 11
Test Date : 06/17/98 Test No : EB14–11 Depth : 17.5–19 FT
Description : DRK GRAY–BRN CLAY W/ TRACES OF ORG AND BLK CARBON

CONSOLIDATION TEST DATA

Project : LOWER GUADALUPE RIVER
Location : SAN JOSE, CA
Project No. : 973017NB
Test No. : EB14-11
Boring No. : EB-14
Test Date : 06/17/98
Tested by : C. WASON
Sample No. : 11
Sample Type : SHELBY
Depth : 17.5-19 FT
Checked by : C. CAPPS
Soil Description : DRK GRAY-BRN CLAY W/ TRACES OF ORG AND BLK CARBON
Remarks : TRIMMED FROM 2.86 DOWN TO 2.429 INCHES IN DIAMETER

	APPLIED PRESSURE (t/ft^2)	FINAL DISPLACEMENT (in)	VOID RATIO	STRAIN AT END (%)	FITTING TIME (min)		COEFFICIENT OF CONSOLIDATION (in^2/s)		
					SQ.RT.	LOG	SQ.RT.	LOG	AVE
1)	0.13	0.007	1.002	0.70	0.0	0.0	0.00E+000	0.00E+000	0.00E+000
2)	0.25	0.008	1.000	0.79	0.0	0.0	0.00E+000	0.00E+000	0.00E+000
3)	0.50	0.011	0.993	1.17	6.8	0.0	1.07E-004	0.00E+000	0.00E+000
4)	1.00	0.018	0.978	1.90	0.0	0.0	0.00E+000	0.00E+000	0.00E+000
5)	2.00	0.034	0.944	3.57	19.6	0.0	3.60E-005	0.00E+000	0.00E+000
6)	4.00	0.059	0.891	6.23	18.5	0.0	3.66E-005	0.00E+000	0.00E+000
7)	8.00	0.095	0.815	9.98	20.1	0.0	3.14E-005	0.00E+000	0.00E+000
8)	16.00	0.135	0.731	14.16	23.6	0.0	2.45E-005	0.00E+000	0.00E+000
9)	32.00	0.177	0.641	18.60	27.7	0.0	1.89E-005	0.00E+000	0.00E+000
10)	2.00	0.136	0.729	14.26	0.0	0.0	0.00E+000	0.00E+000	0.00E+000
11)	0.13	0.093	0.819	9.78	0.0	0.0	0.00E+000	0.00E+000	0.00E+000

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Test Date : 06/17/98
Tested by : C. WASON
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Sample Type : SHELBY
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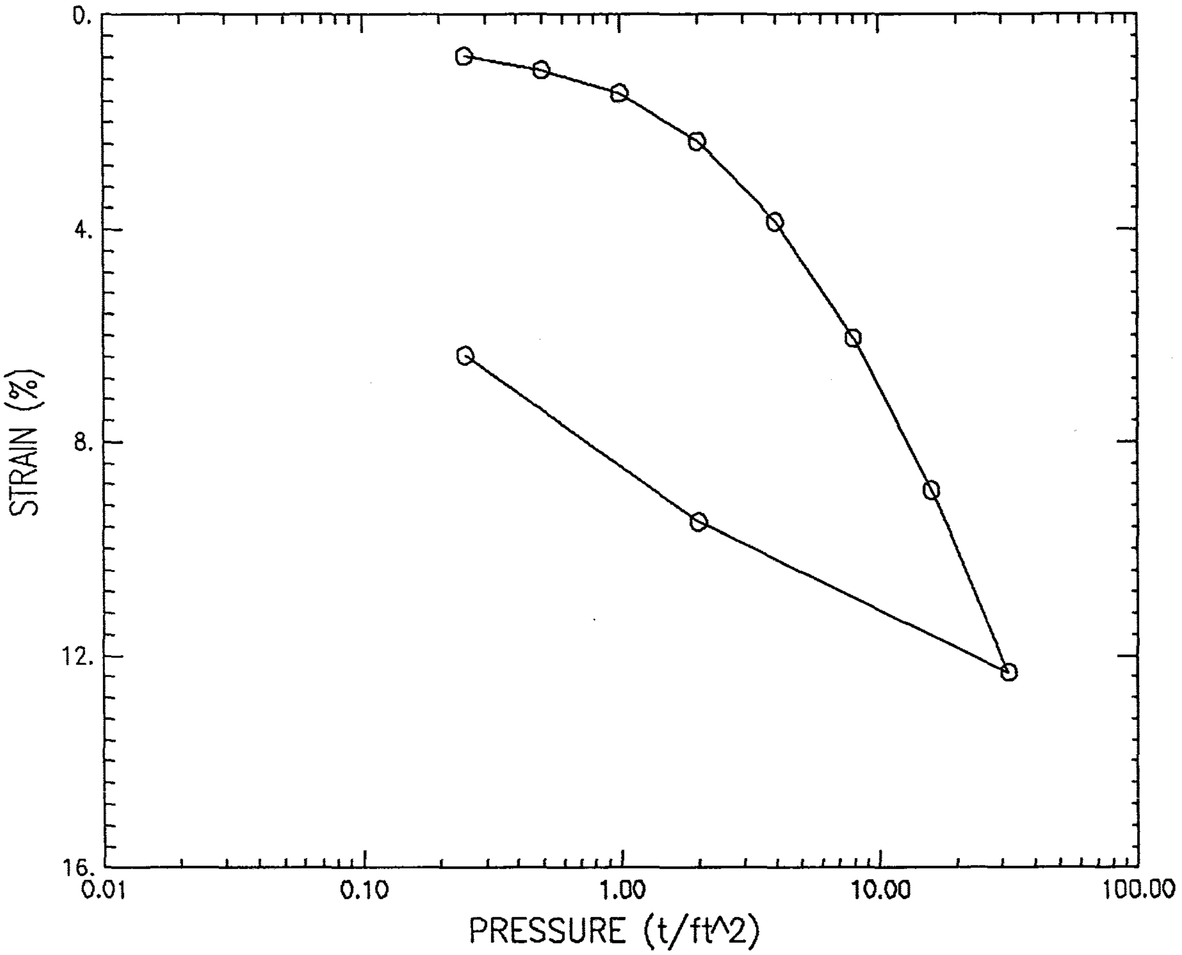
Checked by : C. CAPPS
Soil Description : DRK GRAY-BRN CLAY W/ TRACES OF ORG AND BLK CARBON
Remarks : TRIMMED FROM 2.86 DOWN TO 2.429 INCHES IN DIAMETER

Liquid Limit : 0
Plastic Limit : 0
Plasticity Index : 0
Specific Gravity : 2.82
Initial Height : 0.95
Sample Diameter : 2.43 (in)
Initial Void Ratio : 1.017
Weight of Piston and top cap : 0.00 (gm)

	TRIMMINGS	SPECIMEN + RING BEFORE	SPECIMEN + RING AFTER	AFTER
CONTAINER NO.		RING	RING	
WT CONTAINER + WET SOIL (gm)	292.89	326.64	320.42	320.42
WT CONTAINER + DRY SOIL (gm)	241.47	290.98	290.98	290.98
WT CONTAINER (gm)	95.29	189.62	189.62	189.62
WT DRY SOIL (gm)	146.18	101.36	101.36	101.36
WATER CONTENT (%)	35.18	35.18	29.04	29.04
VOID RATIO	------	1.02	0.82	------
DEGREE OF SATURATION (%)	------	97.64	99.99	------
DRY DENSITY (lb/ft^3)	------	87.32	96.77	------



			BEFORE TEST	AFTER TEST
OVERBURDEN PRESSURE (t/ft^2)		WATER CONTENT (%)	19.506	19.057
PRECONSOL. PRESSURE (t/ft^2)		DRY DENSITY (lb/ft^3)	104.701	111.834
COMPRESSION INDEX		SATURATION (%)	85.327	99.999
TYPE SPECIMEN		VOID RATIO	0.622	0.518
DIA. (in) 2.430	HT. (in) 0.962	BACK PRESSURE (t/ft^2)		

CLASSIFICATION GRAY BROWN SILTY CLAY WITH TRACES OF ORGANIC			
LL 0.0	PL 0.0	PI 0.0	PROJECT LOWER GUADALUPE RIVER
GS 2.720	D_{10}		Data File: WB3-9.CON
REMARKS			BORING NO. WB-3	SAMPLE NO. 9
			DEPTH 15-17.5 FT	DATE 06/18/98

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CONSOLIDATION TEST REPORT

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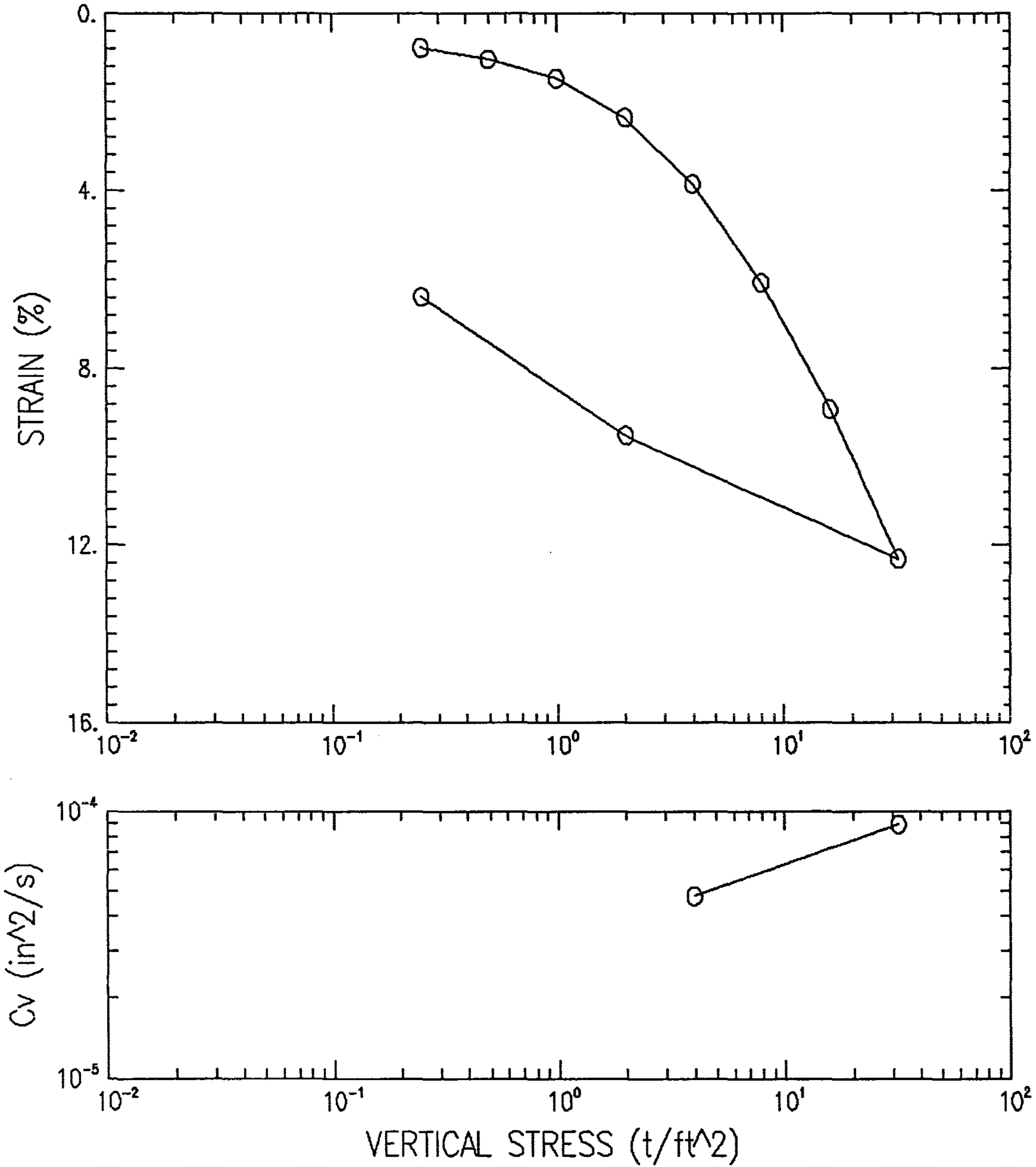
SUMMARY REPORT



Woodward Clyde Consultants
Project Name : LOWER GUADALUPE RIVER
Project No : 973017NB Boring No : WB-3 Sample No : 9
Test Date : 06/18/98 Test No : WB3-9 Depth : 15-17.5 FT
Description : GRAY BROWN SILTY CLAY WITH TRACES OF ORGANIC

CONSOLIDATION TEST DATA

Project : LOWER GUADALUPE RIVER Location : SAN JOSE, CA Project No. : 973017NB
Test No. : WB3-9
Boring No. : WB-3 Test Date : 06/18/98 Tested by : C. WASON
Sample No. : 9 Sample Type : SHELBY Depth : 15-17.5 FT
Checked by : C. CAPPS
Soil Description : GRAY BROWN SILTY CLAY WITH TRACES OF ORGANIC
Remarks : TRIMMED FROM 2.86 DOWN TO 2.43 INCHES IN DIAMETER

	APPLIED PRESSURE (t/ft^2)	FINAL DISPLACEMENT (in)	VOID RATIO	STRAIN AT END (%)	FITTING TIME (min)		COEFFICIENT OF CONSOLIDATION (in^2/s)		
					SQ.RT.	LOG	SQ.RT.	LOG	AVE
1)	0.25	0.007	0.609	0.77	0.0	0.0	0.00E+000	0.00E+000	0.00E+000
2)	0.50	0.010	0.605	1.03	0.0	0.0	0.00E+000	0.00E+000	0.00E+000
3)	1.00	0.014	0.598	1.46	0.0	0.0	0.00E+000	0.00E+000	0.00E+000
4)	2.00	0.023	0.584	2.36	0.0	0.0	0.00E+000	0.00E+000	0.00E+000
5)	4.00	0.037	0.559	3.85	15.0	0.0	4.77E-005	0.00E+000	0.00E+000
6)	8.00	0.058	0.524	6.06	0.0	0.0	0.00E+000	0.00E+000	0.00E+000
7)	16.00	0.086	0.477	8.91	0.0	0.0	0.00E+000	0.00E+000	0.00E+000
8)	32.00	0.118	0.422	12.31	6.8	0.0	8.92E-005	0.00E+000	0.00E+000
9)	2.00	0.091	0.468	9.51	0.0	0.0	0.00E+000	0.00E+000	0.00E+000
10)	0.25	0.061	0.518	6.38	0.0	0.0	0.00E+000	0.00E+000	0.00E+000

CONSOLIDATION TEST DATA

Project : LOWER GUADALUPE RIVER Location : SAN JOSE, CA Project No. : 973017NB
Test No. : WB3-9
Boring No. : WB-3 Test Date : 06/18/98 Tested by : C. WASON
Sample No. : 9 Sample Type : SHELBY Depth : 15-17.5 FT
Checked by : C. CAPPS
Soil Description : GRAY BROWN SILTY CLAY WITH TRACES OF ORGANIC
Remarks : TRIMMED FROM 2.86 DOWN TO 2.43 INCHES IN DIAMETER

Liquid Limit : 0 Plastic Limit : 0 Plasticity Index : 0
Specific Gravity : 2.72 Initial Height : 0.96 Sample Diameter : 2.43 (in)
Initial Void Ratio : 0.622 Weight of Piston and top cap : 0.00 (gm)

	TRIMMINGS	SPECIMEN + RING BEFORE	SPECIMEN + RING AFTER	AFTER
CONTAINER NO.		RING	RING	
WT CONTAINER + WET SOIL (gm)	266.67	333.68	333.13	333.13
WT CONTAINER + DRY SOIL (gm)	237.28	309.76	309.76	309.76
WT CONTAINER (gm)	86.66	187.13	187.13	187.13
WT DRY SOIL (gm)	150.62	122.63	122.63	122.63
WATER CONTENT (%)	19.51	19.51	19.06	19.06
VOID RATIO	------	0.62	0.52	------
DEGREE OF SATURATION (%)	------	85.33	100.00	------
DRY DENSITY (lb/ft^3)	------	104.70	111.83	------

SECTION 4

HYDRAULIC CONDUCTIVITY

ASTM D5084-90, METHOD C Date 07/01/98

Project Name **LOWER GUADALUPE RIVER** Project Number **973017NB**

Specimen No. **EB3-16-4 30-31.5 feet**

Description olive gray sandy silty clay/clayey silt

Tested By S. Capps Reduced By S. Capps Reviewed By C. Wason

Standpipe Area 0.0851 cm^2 Height(f) 6.80 cm Area(f) 19.07 cm^2

Wet Weight Before Test 263.82 gms Initial Water Content 25.08 %

Wet Weight After Test 255.40 gms Final Water Content 21.09 %

Dry Weight 210.92 gms Diameter 1.940 in Volume 129.68 cm^3

Moist Unit Weight(i) 126.95 pcf Dry Unit Weight(i) 101.50 pcf

Cell Pressure 85.00 psi **Effective Pressure 5.00 psi**

Back Pressure 80.00 psi Permeameter No. 1

P-LEFT, psi	P-RIGHT, psi	STANDPIPE, centimeters	TIME, min-sec	**k = cm/sec**
80.00	77.16	Initial H1 283.8 H2 52.6 Final H1 274.2 H2 62.3	Initial,min 0.0 Final,min 66.0 3960 sec	3.34E-7
"	"	Initial H1 283.8 H2 52.7 Final H1 275.6 H2 61.0	Initial,min 66.8 Final,min 124.8 3480 sec	3.23E-7
"	"	Initial H1 283.8 H2 52.8 Final H1 271.9 H2 64.7	Initial,min 125.7 Final,min 209.7 5040 sec	3.27E-7

$$k = \frac{2.303 \times A \times L}{2 \times a \times t} \times \log \frac{h_o}{h_f}$$

AVERAGE = 3.28E-7 cm/sec

HYDRAULIC CONDUCTIVITY

ASTM D5084-90, METHOD C Date 07/01/98

Project Name **LOWER GUADALUPE RIVER** Project Number **973017NB**

Specimen No. **EB11-9-4 14.5-16 feet**

Description brown silty sand

Tested By S. Capps Reduced By S. Capps Reviewed By C. Wason

Standpipe Area 0.410 cm^2 Height(f) 9.30 cm Area(f) 19.07 cm^2

Wet Weight Before Test 278.70 gms Initial Water Content 8.57 %

Wet Weight After Test 331.00 gms Final Water Content 28.94 %

Dry Weight 256.71 gms Diameter 1.940 in Volume 177.35 cm^3

Moist Unit Weight(i) 98.06 pcf Dry Unit Weight(i) 90.32 pcf

Cell Pressure 85.00 psi **Effective Pressure 5.00 psi**

Back Pressure 80.00 psi Permeameter No. 2

P-LEFT, psi	P-RIGHT, psi	STANDPIPE, centimeters	TIME, min-sec	**k = cm/sec**
80.00	80.00	Initial H1 83.0 H2 50.7 Final H1 70.4 H2 63.4	Initial,min 0.0 Final,min 5.0 300 sec	5.09E-4
"	"	Initial H1 82.3 H2 51.2 Final H1 70.1 H2 63.4	Initial,min 0.0 Final,min 5.0 300 sec	5.11E-4
"	"	Initial H1 82.0 H2 51.5 Final H1 69.2 H2 64.3	Initial,min 0.0 Final,min 7.0 420 sec	5.07E-4

$$k = \frac{2.303 \times A \times L}{2 \times a \times t} \times \log \frac{h_o}{h_f}$$

AVERAGE = 5.09E-4 cm/sec

HYDRAULIC CONDUCTIVITY

ASTM D5084-90, METHOD C Date 06/30/98

Project Name **LOWER GUADALUPE RIVER** Project Number **973017NB**

Specimen No. **WB10-11-4 26-27.5 feet**

Description GRAY BROWN GRAVELLY SILTY SAND

Tested By S. Capps Reduced By S. Capps Reviewed By C. Wason

Standpipe Area 0.251 cm^2 Height(f) 9.40 cm Area(f) 19.07 cm^2

Wet Weight Before Test 392.1 gms Initial Water Content 9.01 %

Wet Weight After Test 400.1 gms Final Water Content 11.23 %

Dry Weight 359.69 gms Diameter 1.940 in Volume 179.26 cm^3

Moist Unit Weight(i) 136.49 pcf Dry Unit Weight(i) 125.21 pcf

Cell Pressure 85.00 psi **Effective Pressure 5.00 psi**

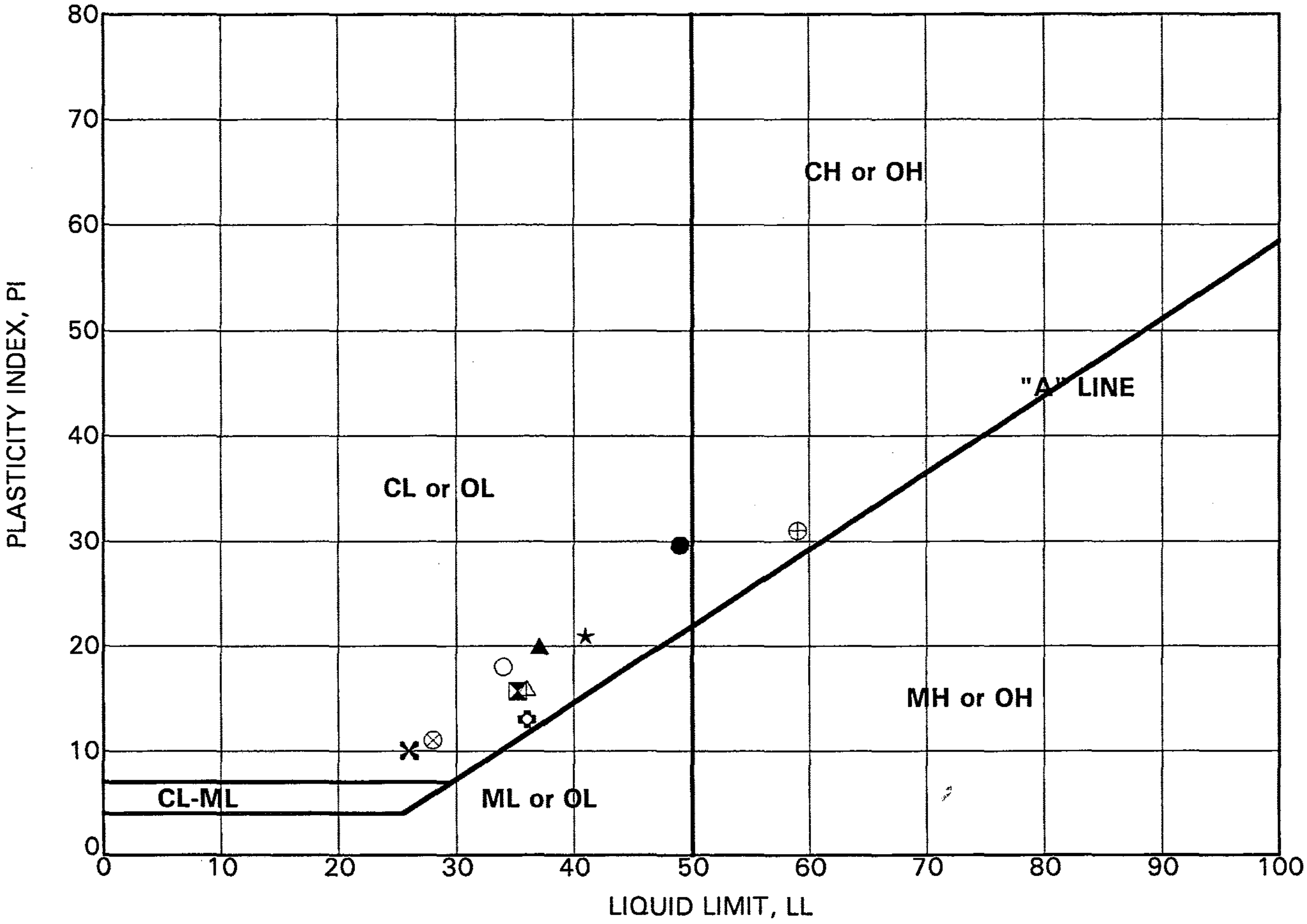
Back Pressure 80.00 psi Permeameter No. 3

P-LEFT, psi	P-RIGHT, psi	STANDPIPE, centimeters	TIME, min-sec	**k = cm/sec**
80.00	80.00	Initial H1 79.5 H2 52.3 Final H1 70.7 H2 61.2	Initial,min 0.0 Final,min 9.0 540 sec	1.20E-4
"	"	Initial H1 79.4 H2 52.5 Final H1 71.0 H2 61.0	Initial,min 0.0 Final,min 9.0 540 sec	1.13E-4
"	"	Initial H1 79.3 H2 52.6 Final H1 70.4 H2 61.5	Initial,min 0.0 Final,min 9.0 540 sec	1.26E-4

$$k = \frac{2.303 \times A \times L}{2 \times a \times t} \times \log \frac{h_o}{h_f}$$

AVERAGE = 1.20E-4 cm/sec

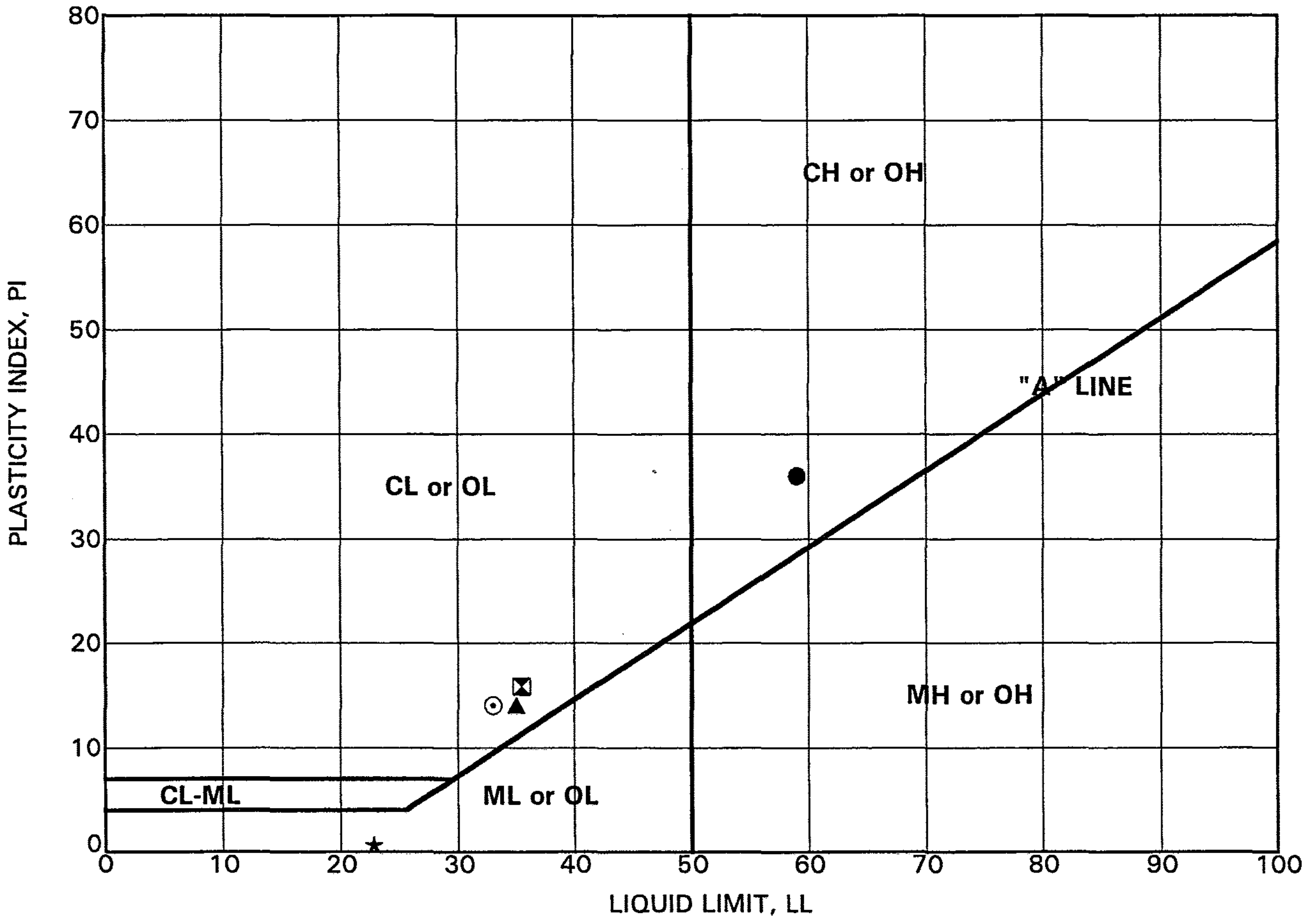
SECTION 5



Boring Number	Sample Number	Depth (feet)	Test Symbol	Moisture Content (%)	LL	PL	PI	Station (m)	Offset (m:pos = east)
WB-03	6	11	●	22	49	19	30	8+40	-49
WB-03	12	22	⧗		35	20	15	8+40	-49
WB-04	3	6	▲		37	17	20	8+87	-49
WB-04	9	32	★		41	20	21	8+87	-49
WB-05	4	7	✕		26	16	10	9+61	-48
WB-08	7	13	✿		36	23	13	12+20	-39
WB-08	12	24	○		34	16	18	12+20	-39
WB-09	6	10	△		36	20	16	12+40	-38
WB-15	11	21	⊗		28	17	11	15+76	-35
WB-17	15	26	⊕		59	28	31	17+30	-22

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT Project Number: 95-973017NB.00	PLASTICITY CHART	Figure

URS Greiner Woodward Clyde



Boring Number	Sample Number	Depth (feet)	Test Symbol	Moisture Content (%)	LL	PL	PI	Station (m)	Offset (m:pos = east)
EB-01	6	12	●		59	23	36	6+23	87
EB-09	6	10	⊠		36	20	16	9+55	44
EB-09	10	17	▲	56	35	21	14	9+55	44
EB-11	8	13	★	17	23	22	1	11+29	42
EB-14	5	7	⊙		33	19	14	13+60	55

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT
Project Number: 95-973017NB.00

PLASTICITY CHART

Figure

4/14/00 GUAD_PI1 GUADE

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SECTION 6

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT
Project No. 95-973017NB.00
7/8/99 GUAD_SV1 GUADE

GRAIN SIZE CURVES

Fig.

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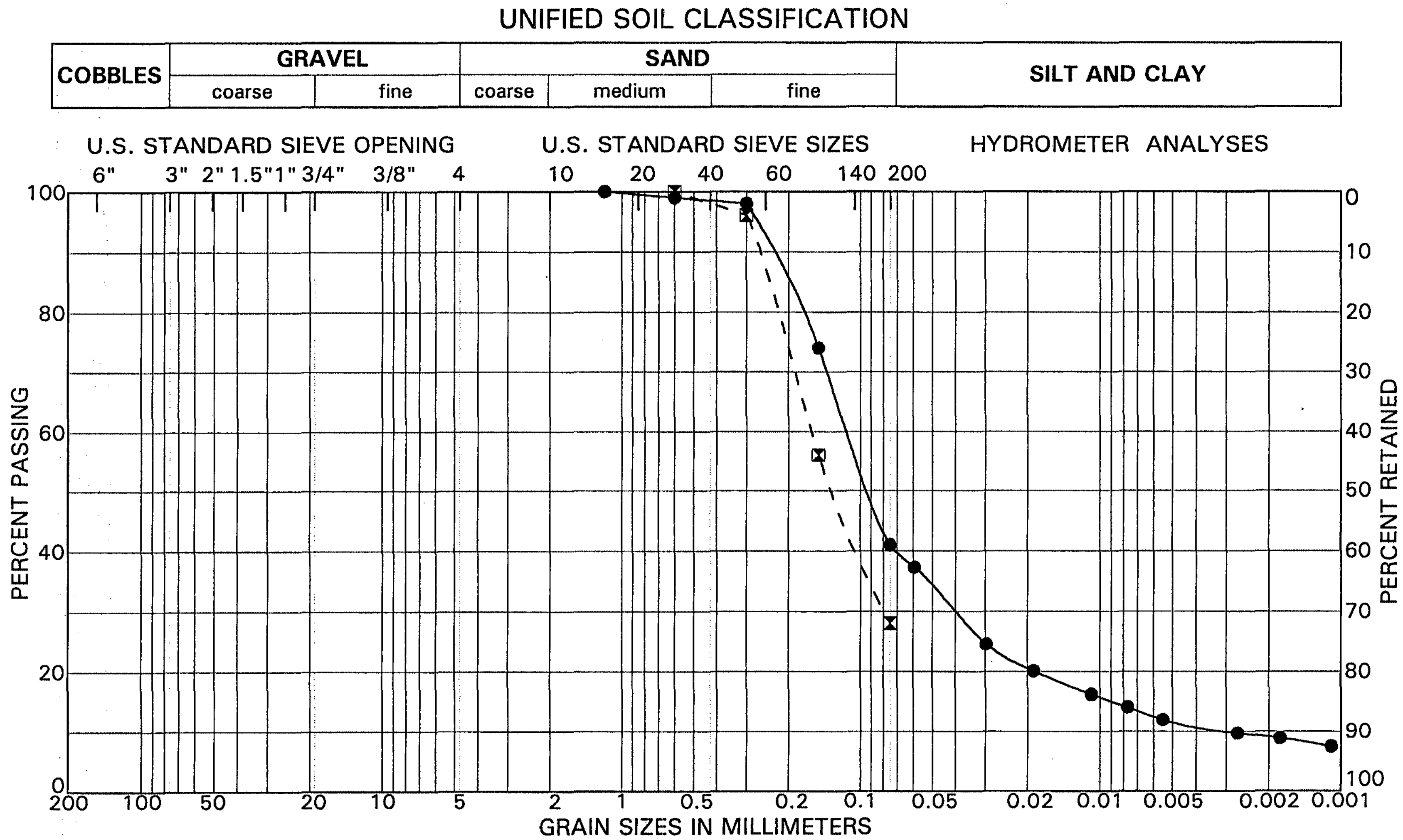

NOTE: Approximate reproduction of curves from original report graphics.

Boring Number	Sample Number	Depth (feet)	Symbol	LL	PI	Station (m)	Offset (m:pos = east)
EB-11	11	18	●			11 + 29	42
EB-11	12	21	☒			11 + 29	42

LOWER GUADALUPE RIVER FLOOD CONTROL PROJECT
Project No. 95-973017NB.00

GRAIN SIZE CURVES

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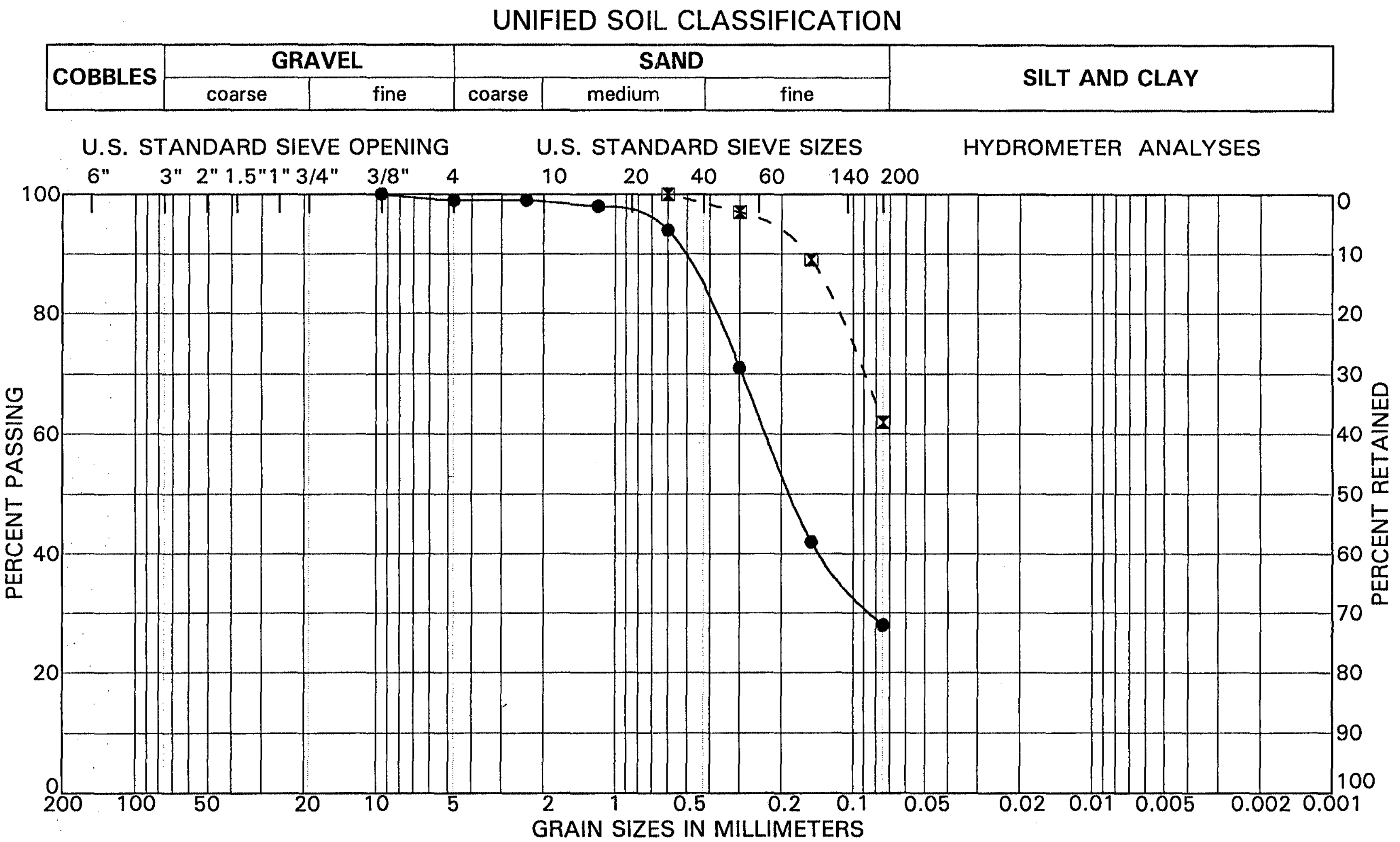
Fig.



NOTE: Approximate reproduction of curves from original report graphics.

Boring Number	Sample Number	Depth (feet)	Symbol	LL	PI	Station (m)	Offset (m:pos = east)
WB-01	17	31	●			7 + 32	-44
WB-17	13	21	☒			17 + 30	-22